GAS JOURNAL

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RESTORATION

THE technical and scientific "experts," to use a word beloved of the popular Press, played a notable part in the defeat of Germany. For a season they bent their energies to the work of decomposition and in pursuance of that aim placed in the hands of our fighting men weapons of destruction more powerful than any that the world has yet seen within historical times. Night after night our bombers rained destruction upon the works that man had with great skill and energy built up for his normal legitimate purposes. It is true that amid the general destruction wrought by those weapons, wielded with skill and so much courage, a certain amount of military damage was also done. For the most part, however, the material damage caused by bombing must generally be comprised more of the objects, buildings, and industrial plant that are used for peaceful purposes than of those used wholly for warlike ends. It is unfortunate that many of these erections of man can be used equally for war or peace, so that their destruction in the general holocaust is justifiable. Such is the fate of the Gas Industry. Such was in a very large measure the fate of the German Gas Industry.

Nothing perhaps reveals the innate foolishness of war more than the task of reconstruction. For many years past, the German technologists had built up the Ruhr-gas network of coke oven plants, gas undertakings, mains, and services, and of general industry supplied with heat from that source. The German carbonization industry and its ramifications in silica brick manufacture, long distance gas transmission, &c., are of long growth and were a model in many respects to the world from which the parallel American and British industries derived much valuable experience. The Ruhr might well have claimed to be the most highly industrialized (not to be confused with "civilized") area of the world. Yet within a year or two mankind, like a fretful child, knocked his castle down so that hardly one stone remained standing upon another. Now he is building it up again, and the building process is more painful than the destructive process. The technical and scientific "experts" are now turning their attention again to synthesis. They are making a good job of it, but the process is very slow. The Paper read by Mr. Greenwood before the Institution of Gas Engineers in Birmingham, and the speech on the same subject at the same meeting by Mr. Masterman, reveal how terrible was the decomposition of civilization under the impact of war, and how vast is the task of rebuilding that which has been broken therein.

A Complete Breakdown

Perhaps the worst part of the whole business has been the effect of war on the human beings exposed to it. "The German administration," we are told, "had completely broken down. . . . As darkness fell, robbery, looting, murder, and rape were the order of the night, and to venture abroad alone and unarmed was foolhardy. . . . Everything had to be kept under guard to avoid looting. . . . Many senior gas officials who had been ardent Nazis had disappeared and works were left in the hands of junior staff without direction or guidance. There were no official representatives of the Industry with whom the conditions could be discussed or through whom instructions could be transmitted to individual undertakings." Well might the German, beholding the condition to which his peculiar *penchant* for following any leader who offers to do his thinking for him had brought his country, say with Kipling, "I have lived to see the things I have given my life to broken, but it is too late for me to stoop and build them up again with worn-out tools."

The effect of Nazi rule on German mentality is not the least interesting of the information given in Mr. Greenwood's Paper. "German officials," says Mr. Greenwood, "were normally unaccustomed to act without specific instructions and referred every problem to the regional officers for authority and guidance"; yet "before the advent of the Nazi regime the Gas Industry in Germany had been subject neither to direct Government control nor to that of any other leading organization." Even now, "the Germans are slow to assume responsibility and still refer many problems for advice." If this is the effect of Government control on an Industry, where shall we be ten years after nationalization has laid its restraining hand upon us? The British mentality differs from the German, but the difficulty of taking decisions when one has not had decisions to take for years must have its effect on any nation. The very greatest care must be taken in the reorganization of our Industry that the responsibility is not concentrated in a few hands. The object-lesson is before us; let us take heed.

Leadership and Initiative Essential

We have devoted a good deal of space to the human problem of German rehabilitation because it appears to us to hold the key to the situation that confronted the German Control Commission in its task of getting the German industrial machine back into gear. Something of the same spirit can be sensed at work in this country, for men look to the Government for a lead when they should be working themselves; moreover, the Government through its controls does its best to see that British business exercises the minimum of initiative. The Control Commission clearly found that its task would become possible only to the extent to which the German could be induced to take control of his own destinies. Because the Germans could not exercise responsibility the Allies' task was far more difficult than it need have been.

The work of the Control Commission is an outstanding example of rebuilding from the ground floor upwards—only there was no ground floor from which to start. Mr. Masterman has described how he in Austria (like Mr. Greenwood

in Germany) "had moved into a country whose economy was wholly dislocated, its buildings damaged, its communications disrupted, and its population demoralized. . . . In Vienna hunger had enfeebled the population and in the early stages they were not strong enough even to unload the food trains."

In Austria, where Mr. Masterman had a wider range than Mr. Greenwood, but apparently more co-operation from the people, it was possible to leave much to the Austrian gas engineers. Mr. Masterman has described how his team interfered as little as possible with the technicians of the gas undertakings on the ground that they knew their job better than anyone else; the Control Commission concentrated on getting them the coal, plant, and materials wherewith to make gas; the native technical men did the rest. Austria is clearly in some respects a more enlightened country than Britain. When the British are short of coal, the Ministry of Fuel and Power gets to work to cut the coal allocation for coke ovens and even for gas-works. In Austria, on the other hand, with a chronic shortage of fuel, Mr. Masterman "was particularly struck by the general acceptance of the fact that where the coal supply was most exiguous it gave best value to the community if processed through the gas-works." The gas undertaking had first call on all suitable coal.

A Colossal Task

In Germany, Mr. Greenwood's team started with an unaccounted-for gas rate of 70% of the make. It is true that this was not wholly, perhaps not even mainly, due to leakage. It was due in part to the absence of meters; nevertheless, there must have been very great leakage through broken gas mains, and these mains were often buried under many tons of rubble. Towns in the Ruhr had all been heavily damaged, Essen, for example, having 60% of its buildings rendered uninhabitable. In Munster, a town with a population of 100,000 persons, 4½ million tons of rubble required to be moved before the gas and water mains could be repaired or even inspected. In all the larger towns, the gas-works had suffered severely from bombing. The distribution system had been so badly damaged that there was no gas in the Ruhr towns. Holder capacity in usable condition was very scarce. Even when plant was restored, coal supplies were so difficult that the plant could not be used to its proper capacity.

The re-establishment of the gas supply required the simultaneous repair of gas-works and coke ovens to supply the gas, of distribution systems in towns and over the Ruhr-gas pipeline to enable the gas to be brought to the consumers, and of the carcassing of houses to enable the gas to be used once it had reached the houses. How colossal this task was can be better imagined than described. It is perhaps a justifiable criticism of Mr. Greenwood's interesting Paper that he leaves us in the dark as to how this was done. There was a general shortage of materials of every sort; one could make Peter presentable by taking the breeches off Paul, but one could not get a new pair of breeches for either of them. Part of the plant had to be broken up in order that the other part would work. No doubt the German gas engineers were able and competent to do a great deal in that direction; if they had not been so, we should have had to export a high proportion of our own gas engineers to Germany to supervise the work. We did not send the Germans any gas plant, nor, so far as we can make out, did the Americans. Thus whatever was done had to be built up from native resources without outside help. German contracting firms were still functioning, fortunately, and their help must have been invaluable. They are not mentioned in Mr. Greenwood's Paper, but we should have liked to know how far they had been damaged and how far their help was of real assistance. There was difficulty in paying them, since the German currency system seems to have been destroyed by the war as completely as the rest of the country's economy. All this work will have to be paid for by the Germans themselves and the burden that will be thereby thrown on the population may be guessed from the experience of Kiel, where on an original capital value of the undertaking of 24 million RM. no less than 17.8 million RM. is estimated to be the cost of complete reconstruction of the gas undertaking. This cost cannot be wiped out; it must increase the capital value of the undertaking and therefore the cost of gas. Yet the gas undertaking is only one of the former assets of Kiel that requires to be rebuilt. The load of debt that the Germans have placed upon their shoulders by their blind obedience to Hitler can never be removed in our time. Time will show whether in fact it is greater or less than the load that Britain will be compelled to bear.

A Magnificent Achievement

It is possible to see how the gas-works have been repaired by taking parts of plant that are sound and making from them a works of smaller capacity. It is infinitely more difficult to visualize the repair of the distribution system, buried under millions of tons of muck and rubble, with a population enfeebled by their experiences. Slowly, and it must have been very slowly, the mains came back again into use as one street after another was cleared by the bulldozers and the roadway was once more exposed. Mains were tested one by one, and repaired. The unaccounted-for gas fell from 70% to 18%—a magnificent achievement. The metering position is still unsolved and can only be solved by getting the meter manufacturers back into full production and keeping them there for some years.

From the industrial point of view, the grid system was the most important. One could well have imagined that this would have been given first priority had it not been for the need for giving the householder some means of cooking and heating. By first getting industry going again, the repair problem would have been eased. Only 18 coke oven plants were in operation in May, 1945; the other 80 were out of action through damage. Some of the grid was undamaged, and the damage to the remainder obviously could not be very extensive; it is, perhaps, not surprising that by early 1946 more than 90% of the high-pressure system was back at work.

The fate of the waterless gasholders is particularly interesting. Remembering what happened at Neunkirchen in 1932 when a waterless holder exploded with devastating effect on the surrounding district, the German Government and the British Board of Trade firmly refused to allow waterless holders to remain in commission during hostilities. The British Government persisted in that attitude with a few exceptions, but the German Government harkened to the voice of the experts and later allowed all waterless holders to operate. Mr. Greenwood reports that of 54 M.A.N. holders in the Ruhr with a total capacity of 3.92 million cubic metres, 23 were completely destroyed and none was workable; yet, he adds, "there has been no record of any explosion arising from war damage." Since on one peaceable occasion a waterless holder exploded there can be no doubt that it is possible to set up a train of conditions which permit an explosion to occur But it is clear that the alleged risk of serious danger from using these holders in wartime is very much over-rated, and there would seem to be no reason why waterless holders should be eschewed from this cause.

The Problem of Rationing

We were not a little interested to observe that Mr. Kelf-Cohen drew from Mr. Greenwood's Paper the conclusion that rationing of gas and electricity is a matter of enormous difficulty, difficulty so great, indeed, that "it can only work if you have really brute force in the background." We are approaching once more that dangerous time when someone is sure to suggest that gas and electricity should be rationed this winter. There is evidence that such rationing can only be applied to a conquered nation, and then not very successfully. "Physical disconnection, in the last resort, is probably the best means of rationing and you can apply that when you are administering a conquered country." Mr. Kelf-

Cohen added that this made him feel that "the problem of rationing gas and electricity in our own country is one of insuperable difficulty." This is a view that many gas engineers have held for some time. It strikes us that Mr. Kelf-Cohen's conclusion is the epitaph of rationing of these commodities.

That, however, moves us to ask what steps are being taken to bring to the householder and his better half the realization of the need for care in the use of fuel this coming winter. Coal and coke will be self-rationing for they will be in short supply. Reduction of the gas pressure, cutting off electricity at certain periods, may reduce consumption during those periods, but not absolutely, for the householder and his wife will express themselves strongly on the subject of the inconvenience caused them, and will use their gas and electricity all the more freely when it is restored. Who can tell how much food was spoiled by the cuts last winter?

This summer should be occupied in making films to show at the local cinemas, in preparing statements to be published in the local Press explaining the position to the housewife in terms that are crystal-clear. No doubt our people are "fed to the teeth" with rationing and all that it entails. They wonder each week more and more who won the war. But if they can be shown clearly what is required of them *and why* (the *why* being supremely important), we believe that they will respond. Is the Fuel Efficiency Branch of the Ministry taking steps to prepare its story for the coming winter? This next winter will be a hard one. Their story had better be good.

Mr. Greenwood's Paper is deserving of the highest praise. He has put before the British Gas Industry the story of the rehabilitation of the German Gas Industry by Allied gas engineers, the performance of a tremendous task that might make anyone quail, however experienced he may be in the manufacture and distribution of gas. The lessons that he has brought home to us are many and various, as we have pointed out. The supreme value of Mr. Greenwood's Paper lies in the lessons that it contains, lessons that do not always show on the surface, but which are inherent in the great achievement of himself and his team.

SUCCESS BREEDS SUCCESS

In 1944, the Secretary and Solicitor of the Newcastle-upon-Tyne and Gateshead Gas Company delivered two lectures to the Officials' Guild of the Company. These lectures proved highly popular and were greatly appreciated by those who had the good fortune to listen to them. The lectures comprised a general introduction to the birth of the Gas Industry and traced in outline the history of the Newcastle-upon-Tyne and Gateshead Gas Company from its beginning in 1817 to the present day. Directors of the Company who were present on the occasion when the lectures were given expressed the wish that the substance of the lectures should be available in permanent form for presentation to those members of the Company interested. They now appear, neatly bound, in a booklet "A Short History of the Newcastle-upon-Tyne and Gateshead Gas Company." The Author has kindly sent us a copy and we have read it with much pleasure; and we would note the final sentence of the booklet, which is a quotation from Virgil's Aeneid—"Hos successus alit; possunt quia posse videntur"—"Success encourages these; they can because they believe that they can."

This appears to the Author—and incidentally to the writer of this brief note—accurately to sum up the attitude of the past and present employees of the Company.

Diary

July 29.—B.G.C.—Domestic Development Committee: Technical Sub-Committee, Watson House, 11 a.m.

July 30.—B.G.C. Domestic Development Committee, Gas Industry House, 10.30 a.m.

Sept. 11.—North British Association of Gas Managers: Annual General Meeting, Town Hall, St. Andrews. (Golf and bowling competitions, Sept. 10; annual excursion, Pitlochry, Sept. 12).

Personal

His many friends in the Industry will be pleased to learn that Mr. DAVID VASS REID, Engineer and Manager of the Gourock Gas Department, has now resumed duty after a long illness. Mr. H. G. Ritchie, retired Gas Engineer of Falkirk, acted at Gourock during Mr. Reid's enforced absence.

* * *

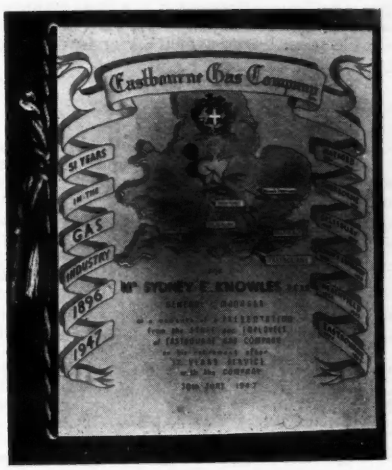
Mr. JAMES MCPHERSON, Engineer and Manager of the Linlithgow Gas Company, has been appointed Engineer and Manager of the Carnoustie Gas Department in succession to Mr. J. M. Ireland, who is retiring. Mr. McPherson was trained at Perth and had experience at Stirling before going to Linlithgow just over a year ago.

* * *

After 18 years' service in the Gas Industry, Mr. P. G. WRIGHT, Sales and Service Manager of the Slough Gas and Coke Company, has been appointed General Manager of the Wales and Monmouthshire Industrial Estates, Ltd., and will take up his new duties on Sept. 1. For the past year Mr. Wright has been Chairman of the Home Counties (Western District) Gas Salesmen's Circle.

* * *

As announced in the "JOURNAL" of July 9, Mr. SYDNEY E. KNOWLES retired on June 30 from the position of General Manager to the Eastbourne Gas Company after having served the Company in that capacity for 17 years. A farewell presentation was made to him on July 8 on behalf of all employees of the Company. The chair was taken by Mr. C. J. B. Sawbridge, General Manager and Secretary, supported by Mr. S. W. Hammond, Engineer and Works Manager, and Mr. H. Simmonds, District Manager; in all, 100 employees and pensioners were present. Mr. Knowles was accompanied by Mrs. Knowles and by Mr. and Mrs. J. R. Barralet (son-in-law and daughter): to support Mrs. Knowles, the wives of the above-named officers were also present in company with the wives of many other employees. The proceedings opened with the presentation of bouquets to Mrs. Knowles and Mrs. Barralet. Mr. Sawbridge said that at the date of his retirement, Mr. Knowles also completed 51 years' service in the Gas Industry, having been with the Watford, Sherborne, Salisbury, and Bishop's Stortford undertakings prior to coming to Eastbourne. His distinguished career was not yet at an end, as he would continue to serve as a Director of the Eastbourne and Heathfield undertakings. The developments which had taken place during Mr. Knowles' 17 years with the Company were also recalled—the reconstruction of the chief offices and showrooms, including the provision of a fine demonstration theatre, the acquisition of the Heathfield Company, the integration of the Seaford undertaking, the building of extensive premises at Seaford and of branch showrooms at Albert Parade, Eastbourne, being the outstanding features. Mr. Hammond referred to his long and happy association with Mr. Knowles and made reference to his concern for the welfare of the staff and to his formation at the outset of the last war of the Company's Active Service Welfare Committee, which attended so well to the needs of employees serving in H.M. Forces and was instrumental in maintaining among them the family spirit for which the Company had always been noted. Other speakers, representative of all departments, testified to Mr. Knowles' charm of manner, his humanity in dealing with personal problems, his constant accessibility to employees and consumers alike, and his all-round skill and success as an administrator; Mr. J. R. Barralet, Managing Director of Barralets, Ltd., added a tribute on behalf of the appliance manufacturers. The presentation took the form of a carriage clock, a pair of Dunhill pipes accompanied by a tobacco pouch and ash-tray, and a memento album designed and executed by the Company's Display Department, containing the autographs of those associated with the presentation. In returning thanks, Mr. Knowles said that his happiest years in the Industry were those spent at Eastbourne. He recalled the athletic and social functions which he attended before the war and hoped that in the future many would derive the same pleasure from similar activities. He was glad that his continued membership of the Board of Directors would bring him regularly into contact with all the friends he had made in the Company.



Front cover of the presentation album

Obituary

The death is reported of Mr. L. G. YOUNG, Managing Director of the Carlow (Eire) Gas Company, and one of the best known figures in the Irish Gas Industry. A native of Cumberland he went to Ireland at an early age and was appointed Manager at Carlow in 1902, becoming Managing Director and Secretary 18 years later. He was for many years an active member of the Irish Association of Gas Managers and was President in 1932, when the 40th annual meeting was held in Dublin. Two years earlier he had presented a Paper to the Association on " Gas Sales at Carlow," showing how the undertaking had developed during his tenure of office. It was due to his energy and enterprise that the Carlow undertaking became one of the most prosperous in the country.

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We record with regret the death on July 10 of Mr. RICHARD HENRY BUXTON, age 71, who, prior to retirement in August, 1945 was Assistant General Manager of the Wandsworth and District Gas Company. Born and educated at Derby, Mr. Buxton served his articles with the engineering firm of Longton & Co. Later he went to West Africa as Engineer-in-Charge of the electrical construction work on the Gold Coast Government Railway. This was followed by an appointment with the Wassau (Gold Coast) Mining Company, as Engineer-in-Charge. On his return to England he was appointed to the National Boiler and General Insurance Company as an electrical engineer. In April, 1917, Mr. Buxton joined the staff of the Wandsworth and District Gas Company as Mechanical Superintendent, and after several promotions was appointed Assistant General Manager in 1943. He was associated with considerable extensions and improvements to plant at the various works of the Company. He leaves a widow and one son, who is the Electrical Engineer of the Wandsworth and District Gas Company.

COAL CONSUMERS' COUNCILS

The Minister of Fuel and Power has appointed the Chairmen and members of the two Consumers' Councils set up under the Coal Industry Nationalization Act. The Chairman of the Industrial Coal Consumers' Council is Sir Ernest W. Smith.

The National Coal Board is represented on both Councils by the Deputy Chairman, Sir Arthur Street, and the Marketing Director, Mr. J. C. Gridley. Dr. E. S. Grumell, Chairman of the Fuel Efficiency Committee of the Ministry, is an independent member of the Industrial Council, Mr. C. H. Chester is also a member of the Council, and Professor D. T. A. Townend, Director of the British Coal Utilization Research Association, is an independent member of the Domestic Council.

The term of office of all members in the first instance is three years. It is intended later to appoint a Deputy Chairman in each Council. The Secretary of both Councils is Mr. H. L. de Bourcier, of the Ministry.

Letter to the Editor

Correct Procedure

DEAR SIR,—May I thank Dr. Barash for calling attention to a point which could with advantage have been included in my article " He Has Letters After His Name " in your issue of July 9 ?

To write " Dr. M. Blank, Ph.D." is an offence almost as heinous as addressing a gentleman as Mr. P. Bloggins, Esq.

Of course, a lot hinges round the correct use of the word " Esquire," which was originally used only to describe a gentleman entitled to bear arms. To-day, as a courtesy title, it is much abused; being used where an individual has not the slightest claim to it and often, alas, omitted in official communications to gentlemen who have every right to it. It appears to have become the practice of some Departments of His Majesty's Government and some local authorities to address all letters to " Mr. Blank " and to ignore " M. Blank, Esq." entirely. In addition to those to whom the right to the title " Esquire " originally and still does, apply, it is now considered correct to use " Esq." for the following:

(i) All gentlemen of British nationality who have held His Majesty's Commission below the ranks in which they would be addressed by their rank if authorized to retain it.
(ii) Holders of degrees of British Universities.
(iii) Barristers-at-Law.
(iv) Members of the Learned Societies and Professional Institutions.

Coming to the point in question, the third of the alternatives mentioned by Mr. Barash is the correct, viz.:

M. Blank, Esq., Ph.D.

If Dr. Blank were, say, M.C., Ph.D., M.Inst.Gas E., it would be quite in order to address him as:

Dr. M. Blank, M.C., M.Inst.Gas E.

In this manner the Ph.D. *must* be omitted. It is, however, in the writer's opinion, more correct to address the letter:

M. Blank, Esq., M.C., Ph.D., M.Inst. Gas E.

and to commence the letter:

" Dear Dr. Blank,"

provided, of course, the correspondent's relations with the addressee permit the familiar opening.

There is one studied exception to the rule. Members of the medical profession who are specialists insist rigidly on being " Mister " by both written and spoken address.

Yours faithfully,
" STICKLER."

P.S.—Any further correspondence should be addressed, via the Editor, to plain " Mister Stickler " !

News in Brief

Schemes for Extensions and Alterations to the works of the Loughborough Gas Department have been prepared and are now receiving the consideration of the Ministry of Fuel and Power.

A Big Scheme is on foot for extending and modernizing the Walsall Corporation gas-works. It has received the approval of the Ministry of Fuel and Power and has been formally adopted by the General Purposes Committee.

The Manchester Employees of George Wilson Gas Meters, Ltd., with wives and lady friends, spent an enjoyable day at Morecambe on July 12 on the occasion of the first outing of the Manchester Works since before the war. It is hoped to re-establish the outing as an annual event.

The Annual General Meeting of the North British Association of Gas Managers will be held at the Town Hall, St. Andrews, on Sept. 11, under the Presidency of Mr. J. M. Dow (Paisley). Entries for the golf competition for the Association Challenge Bowl, to be played over the Eden Course, St. Andrews, on Sept. 10, should be sent to Mr. W. P. Rae, New Grange Works, Edinburgh, 11, not later than Aug. 25. The bowling competition will also be held on Sept. 10 on the St. Andrews Bowling Green, Kinnesburn Road; applicants for membership and intending competitors should forward their entries and subscription of 5s. to Mr. T. Thomson, c/o Gillon, Brown & Co., Ltd., 68, Gordon Street, Glasgow, C.1, not later than Aug. 30. Entries for the ladies' golf competition, also to be played on Sept. 10, over the Jubilee Course, should reach Mrs. D. D. Melvin, 186, Craigleith Road, Edinburgh, 4, not later than Aug. 30. A civic reception and dance will be held in the Younger Graduation Hall, St. Andrews, on the evening of Sept. 11. The annual excursion on Sept. 12 will take the form of a motor coach tour to Pitlochry.

The Permutit Company, Ltd., London, inform us that they installed base-exchange plant using a carbonaceous zeolite as far back as 1937, and that the " Permutit " brand of carbonaceous zeolite has been in continuous use since that date. The Company hold Patent Nos. 450,179, 450,540, 450,574, 450,575, 513,801, 559,941 in respect of carbonaceous zeolite.

Trade Statistics for March, 1947, just issued by the Department of Industry and Commerce in Eire, show no imports of gas coal, as against 15,722 tons, valued at £43,555 in March, 1946. This leaves the total of these imports for the first three months of 1947 at 88,512 tons, valued at £253,820, compared with 223,625 tons, valued at £607,776 at March, 1946.

For the First Time for a considerable period, an increase in the yield of gas per ton of coal has been reported by the Denny and Dunipace Gas Department, due, it is believed, to an improvement in the quality of coal. The Corporation has proposed extending the gas undertaking with the erection of a three-lift 500,000 cu.ft. gasholder, but the Ministry of Fuel and Power has refused consent owing to the shortage of materials.

Increased Costs of Production have forced an increase in the price of gas at Forfar. The Council was informed last week that an increase of 4d. per 1,000 cu.ft. was necessary to balance costs against income. The increase had been necessitated by increased wages arising from the 44-hour week and dearer coal. This now makes Forfar gas 4s. 7d. per 1,000 cu.ft. as compared with a higher level in adjoining areas. The improbability that this rate could be maintained for any length of time was indicated by the Convenor, who said that the written estimates to be submitted in a short time would show the need for a further increase.

MR. THERM'S EXCELLENT "SERVICE"

A photograph taken on the Trinity College Courts, Cambridge, which were used by permission of the College authorities for the Annual Inter-Gas Companies' Tennis Tournament recently. The group includes Mr. Hunter Rioch (Managing Director of the Cambridge University and Town Gas Light Company), Mr. R. Turner (General Manager and Secretary of the Bedford District Gas Company), Mr. W. A. Evetts (Assistant Chief Engineer of the Watford

and St. Albans Gas Company), Mr. F. J. Alsop (Secretary of the Northampton Gas Company), and Mr. E. H. Winch (Deputy Engineer and Manager of the Cambridge Company). The handsome shield was won by Watford and St. Albans after a strenuous day's play, thus repeating their success of last year. The trophy was presented to the winning side's captain by Mr. Hunter Rioch during the evening, when the teams dined together at the Dorothy Restaurant, Cambridge.

ESSEX AGRICULTURAL SHOW

The Colchester Gas Company had a striking stand at the recent Essex Agricultural Show. This was the first County Agricultural Show to be held in Colchester for over 20 years, and the paid attendance (exclusive of members) amounted to well over 40,000 for the two days.

Colchester Gas Company's Display at the Essex Agricultural Show

Considerable interest was shown in the Company's range of domestic appliances as well as industrial apparatus for steam raising, general heat treatment work, grain and grass drying, soil warming and greenhouse heating. The Company was indebted to the London and Counties Coke Association and all manufacturing firms who assisted by delivering apparatus in time for the Show.

The construction of the stand is of interest in view of the present difficulty regarding advertising materials, &c. It was decided to take a chance with the weather, and incidentally the result was fortunate. The stand was made on a framework of 2 in. wrought iron piping, to the face of which was attached 2 in. by $\frac{3}{8}$ in. wood batten frame. This frame was covered on the two 40 ft. sides with "Sizalcraft" left over from A.R.P. purposes, and the end frames from Essex board used originally as a blackout. The whole scheme was in two shades of green with rust coloured lettering. The roof consisted of $\frac{1}{4}$ in. Asbestone sheets which held in position further sheets of "Sizalcraft," which in turn rolled down at night to protect the appliances from inclement weather.

COURSES IN ILLUMINATING ENGINEERING

Two courses in Illuminating Engineering have been arranged to take place in London during the period September, 1947, to May, 1948, one at the Northampton Polytechnic on Wednesday afternoons and evenings, the other at the Borough Polytechnic on Thursday afternoons and evenings.

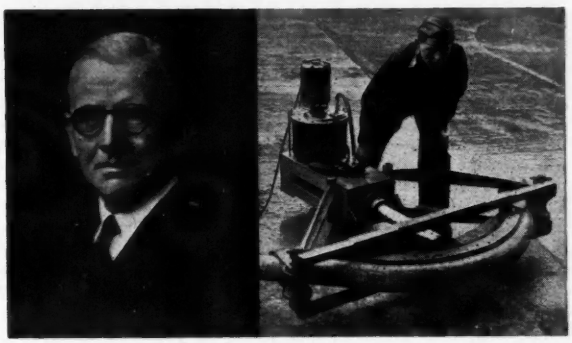
These are considerably shorter than the normal full-time courses hitherto arranged. Many employers will, therefore, doubtless be willing to release candidates on their staff for one afternoon a week and the candidates themselves be willing to devote one evening a week to this training.

The courses will prepare candidates for the City and Guilds of London Institute intermediate examination in Illuminating Engineering. The passing of this examination is one of the essential qualifications for those desiring to be placed on the I.E.S. Register of Lighting Engineers. Those wishing to enter their names for either of these courses should communicate with the Polytechnic concerned.

A course has also been arranged at the Central Technical College, Birmingham, to commence in September, and other courses are in prospect at Cardiff, Leeds, Liverpool, and Manchester, further details of which will be available from the Illuminating Engineering Society, 32, Victoria Street, London, S.W.1, in due course.

NEW PUMP MECHANISM

Last week we were privileged to view a small-scale model of the swashplate or conic crank mechanism designed by Mr. T. E. Beacham and produced by Messrs. Oswalds and Ridgway, Ltd. The mechanism in three stages produces a very great pressure—3½ tons per square



(Left) Mr. T. E. Beacham, the designer, and (right) the pump in operation in conjunction with a pipe bending machine manufactured by Commercial Structures, Ltd., Staffa Road, London, E.10.

inch—and the mechanism contains no connecting rods, no slipper, no universal joint. The reciprocation is obtained by direct contact between the plungers and a single swashplate, and it is claimed that the relative motion at contact is a rolling one without friction or wear. Friction losses, even at 1,500 r.p.m. are low, and the pumps are free from pulsations.

ROYAL CORNWALL SHOW

The Royal Cornwall Show held at Truro after a lapse of eight years witnessed a fine co-operative effort by the gas undertakings of Cornwall arranged by the Cornish Gas Association. They were fortunate to secure the second stand in the main avenue, the excellent design and finish of the frontispiece attracting attention as the record crowd entered the main gates. A package kitchen formed the main exhibit in the front of the stand and was most effective in arresting attention. The internal walls were lined with foliage green cloth which provided an excellent background for the coloured enamel finishes of the gas appliances exhibited. These included hotel equipment, fish range, laundry section, and all types of domestic appliances, many of which were connected to gas and water supplies for demonstration. A popular feature was the provision of tea and coffee for which no charge was made, but a collecting box on behalf of the Royal Cornwall Infirmary brought in a considerable sum to the benefit of that institution. The stand was constructed and erected by the staff of the Truro Gas Company to the delight and appreciation of the members of the Association.

Mr. R. J. Williams, Engineer and Manager of the Truro Gas Company, as the Chairman of the local Chamber of Commerce, joined Lord and Lady Falmouth and the Mayor and Mayoress of Truro in receiving the guests at the reception and ball held on the eve of the show. The show broke all previous records, 44,000 having passed through the turnstile during the two days.

WAVERLEY ASSOCIATION OF GAS MANAGERS

PRESIDENTIAL ADDRESS*

of

JAMES DICKSON, M.Inst.Gas E., Dundee

(*Continued from p. 150*)

THE matter of decentralized storage is bound up with supply pressure, and high pressure gasholders are likely to fill an important place in future schemes of distribution. These will continue to gain in favour on account of the assistance they provide to distribution problems. Gas can be drawn by automatic control from the high or low pressure supplies at off-peak periods and used for supplementing the peak load in areas where the supply conditions could not be met otherwise than by running low pressure trunk mains for long distances. There are few possibilities existing in large towns for large size mains being laid, except in carriageways, having regard to the congestion under pavements in the form of gas, water, electricity, telegraph, telephone, and drainage services. Necessity has thus arisen in Dundee for the laying of a high pressure ring main, with governing arrangements enclosed in kiosks. The provision of high pressure gasholders, singly or nested, as occasion demands, each capable of storing a minimum of 250,000 cu.ft. at 50 lb. pressure per sq. in. and governed down to deliver at appropriate pressures for ordinary use, is at present receiving consideration.

A larger number of smaller gasholders of the column-guided or spiral type may be desirable, situated where possible, in low-lying areas in order that their dimensions may not unduly obtrude on the landscape or encroach on the amenities of the neighbourhood.

Storage facilities will continue to be sought for on the outside ring of the present distribution system as provision requires to be made there for heavy gas demands in both the domestic and industrial field of operations. In the case of the former, the water heating load will continue to grow, while industrial developments tend to spread on to and beyond the fringe of the present supply area. During the war industrial use of gas increased in Dundee from a figure of 83 million cu.ft. in 1939, which represented 4.76% of the total consumption, to a figure of 251 million cu.ft., representing 13.98%, and although it has since receded it is being maintained around a consumption twice that of 1939.

Towards the end of the war a commencement was made on the development of an industrial estate on the north-west of the city boundary, which will eventually comprise 86 acres of land and provide one million sq. ft. of factory space for the employment of 8,000 workers. A recent development in the same area comprises 92 acres, and this is planned to provide space for the employment of 2,000 workers. In order to meet gas demands and at the same time plan for potential needs outside this fringe, high pressure ring mains and holders provide an effective solution to overcoming difficulties from the standpoint of both storage and distribution.

A useful adjunct to such will sometimes be found in converting low pressure trunk feeder mains into medium high pressure mains at pressures around 2 to 3 lb. per sq. in. In some cases these may travel considerable distances from the station governors before any branch mains are connected, and it may be that the latter can be disconnected or either re-connected to another main which will satisfy the requirements of the area. Thus it may be possible to continue the intermediate high pressure mains a still further distance, without any governing being required on branch mains up to the critical point at which its service is essential and where governing equipment can be installed.

Service

The future build-up of gas service will be of a kind which will, in due time, safeguard the supplier and the consumer in regard to modernized equipment of the best grades furnished on terms which will enable the Gas Industry not only to maintain, but enhance, its reputation for reliability and enterprise in the field of public service. The present uncertainty in regard to costs of all commodities is a phase of business which, sooner or later, must settle down to a level which will provide an index to the prices at which gas and gas-using equipment can be supplied in competition with other fuels. Service in the past has been extremely generous in regard to free-on-loan appliances and the fitting of services and appliances, the cost of which has been borne in the price of gas. Future calls upon the resources of undertakings in this respect cannot, however, be justified if the price of the main commodity is to be kept at competitive levels.

The benefits of a block rate system of gas charges should not require commendation at this stage of the development of pricing; yet it has not been pursued to the full extent of its possibilities, and indeed in quite a few cases has not been introduced.

Competitive issues will raise the desirability of charges of this nature being further developed in the form of a tariff such as will cover all marginal costs and make a fair contribution to the general costs of gas supply. From the salesman's angle this would be an additional weapon with which to meet competition in all its phases while paying due regard to the relative magnitude of the customer, cost, demand cost, and commodity prices† upon respective forms of supply of heat energy.

There is one other matter appertaining to statistics to which I consider it desirable to refer. It does appear essential that existing records of undertakings should be extended, as opportunity arises, in order to embrace not only the number and types of appliances used for industrial, commercial, and domestic purposes, but also data bearing on their history, running costs, and maintenance so that this information may be of use to the sales and maintenance staff in fostering business by knowledgeable methods.

Conclusion

I have confined this Address to what appear to me to be some of the chief technical problems confronting the Industry, but, in closing, desire to refer to certain aspects of the future which figure prominently in the thoughts of gas engineers and have a bearing on their professional interests.

The Institution of Gas Engineers, our parent technical body, is presently heavily engaged in the search into various processes and methods for increasing production from existing plant. These activities during the past year have not been lacking in new interests, and I feel assured that the future of gas engineering will benefit from expenditure of effort in that direction which will lend assistance to further advancement in fuel economy. The Education Scheme is encompassing many phases of the work of training aspirants to positions of care and responsibility; provided it be given a selection of young men possessed of character and sound educational qualifications the scheme furnishes assurance that vigour and new life will continue to be infused into the work of the Gas Industry.

This is the first opportunity I have had to put forward the request made to me by Colonel C. M. Croft, D.L., J.P., Chairman of the Benevolent Fund of the Institution of Gas Engineers, for a subscription from affiliated Associations to assist in meeting the additional claims made upon the funds. Due to economic conditions the means of subsistence of widows and children of deceased members of the Institution are becoming more straitened. Illness makes a serious call upon family resources at any time, especially so in the cases under notice. A special request is now made for attention being directed towards them in order that their way may be made somewhat easier and prospects lightened by the thought that others are willing to bear a part in the alleviation of illness and distress. I put forward this request in the hope that you may participate in lending financial assistance to this deserving object.

I would also commend the claims which the newly constituted Gas Engineers' National Guild has upon your personal attention. For long there has been a desire among a large number of gas engineers for a body whose work would comprise those matters affecting the conditions of service and salaries paid for the qualifications and responsibilities attached to posts as gas engineers and managers, deputies, works superintendents, and other posts of importance in the manufacturing and distributing sides of the work of the Industry. The impending nationalization of the Industry has inevitably strengthened the need for such a body. Whatever views may be expressed as to its present scope, the decision taken at the General Meeting in London in November opened the door wide to

* Delivered at the Annual Meeting, Edinburgh, June 27.

† "Evolution in Fuel Supply," J. E. Davis, "GAS JOURNAL," Dec. 31, 1944.

those in charge of the smallest undertakings and junior members of staffs upwards. The response from the latter was disappointing, probably because they were already members of one or other of the negotiating bodies which have hitherto functioned on their behalf. It is regarded as extremely important that the membership of the Guild must be confined to those who can benefit from its activities, and it is the only body that can sufficiently represent chief gas engineers and their deputies. Unstinted work has been put in to the efforts to constitute the Guild on a sound footing which will enable it to negotiate on a national basis, and approach has been made to the Federation of Gas Employers in order to determine the position arising from the representations put forward. It is to be hoped that Scotland will embrace the opportunity of membership of this national body to an extent which will enable members to make a significant contribution towards the future welfare of gas engineers.

I consider that it is outside my purview to express an opinion regarding the nationalization of the Gas Industry. That is a matter which has received the unremitting attention of the British Gas Council in London and negotiations have been conducted with the Government over a lengthened period. We must now await the result. I desire, however, to pay my tribute to the work of the British Gas Council, Scottish Management Committee, under its Chairman, Mr. David Fulton, and to the various group committees—especially the Development Committee—who have undertaken many tasks during the past year which will have important effects on the future structure of the Industry. The work of the Central Development Committee has been of exceptional value in discussions with Government officials on various subjects involving housing, services, and gas appliances which have considerably lightened the duties of the committee in Scotland.

I have made this contribution to your Transactions before retiring from office at the end of a period of somewhat over 50 years spent in the Gas Industry. Much of it has been written during the blizzards and frosts of February and March, and it may be that before it is read the course of events will have given a devious turn to a few of the issues with which I have endeavoured to contend.

These fundamentals, however, will remain: The aid which the Industry provides to the fuel situation, the importance of its products in home and overseas markets, the guarantee of quality which gas service carries with it, and the place which it must continue to fill in the welfare of the home and the nation; in all of which the initiative of gas engineers will continue to be exerted towards the provision of ample supplies of heat energy.

"INDUSTRIAL WALES"

To make more widely known the importance of Wales as an existing and potential industrial centre and to demonstrate the variety of products now manufactured there, an All-Wales and Monmouthshire Exhibition under the title of "Industrial Wales" is to be held at Olympia, London, from Aug. 28 to Sept. 13. The exhibition is being promoted by the Industrial Association of Wales and Monmouthshire, a new body formed recently by the amalgamation of the South Wales and Monmouthshire Industries Association and the North Wales Association of Industries, under the Presidency of Sir Gerald Bruce.

As recently as ten years ago the industrial set up of Wales was largely restricted to coal, steel, tinplate, and associated ancillary undertakings. To-day manufacturing activities are of such variety that hardly a trade can be mentioned for which products of some kind are not made in the Principality, and it is the aim of the Association to build up a diversity of interests. The sanctuary given to many firms during the war period provided a good start. They had come to Wales gladly, or by Government order. They had established themselves and learned to appreciate the intelligence of Welsh labour, the facile adaptability with which both men and women turned to new industrial processes. These firms could be expected to remain; they have in fact done so. Others must be attracted, and in this Wales has an advantage too—the huge Government war production factories which are being made available to manufacturing concerns.

Already the Gas Industry is making a notable contribution to the industrial developments that are taking place, and the British Gas Council will participate in the exhibition. The heavy industries will be represented by coal, steel, tinplate, shipping, chemical, and quarrying interests, and the light industries will cover a wide range of textiles, hosiery, jewellery, clocks and watches, spectacles, and optical accessories. Engineering products will be particularly varied. The National Coal Board, in conjunction with the Ministry of Fuel and Power, will provide a central feature showing the various aspects of the coal industry, and other Government Departments to be represented are the Board of Trade and the Ministry of Supply.

Shipping interests are co-operating to form a "Court of Shipping" to demonstrate facilities available at Welsh ports. A "Court of Cities and Counties" will be another feature, in which various civic interest in Wales will tell their story, whether industrial, residential, or of holiday-making interest.

RETFORD ENGINEERING WORKS VISITED

A visit was paid on July 3 by the South Yorkshire Gas Group to the Beehive Works of W. J. Jenkins and Co., Ltd., Retford. In the absence of Mr. R. M. Goodman, Managing Director, the visitors and their ladies were received by Mr. R. W. Crowther, Technical Director; Councillor B. Pollard, Works Director; and Mr. W. Morland Fox, Sales Director.

Of special interest to the visitors were the various units of intermittent vertical chamber ovens which they saw in the course of manufacture, notably the water-sealed bottom doors and the C.I. independent hydraulic mains. In the fitting shop, a number of D.B. stoking machines were assembled for testing, one of these being the smallest complete machine yet built, having been designed to operate on 22 in. by 16 in. by 13 ft. 4 in. through retorts.

In the D.B. conveyor chain shops, the visitors saw the complete manufacture of D.B. chain from the raw material to the finished product. The whole of this is now carried out in new shops specially designed for the purpose.

The visitors and their ladies were entertained to luncheon at the White Hart Hotel, Retford.

Mr. **R. W. Crowther,** after a welcome to the guests, said that it gave great pleasure to the Company to have the opportunity of entertaining the Group, and to show them the works and

Directors of W. J. Jenkins and Co., Ltd. with their guests at the Beehive Works.

products of the firm, and the developments which had taken place during recent years. This, he believed, was the first visit to the works during the last 20 years by such an organization, and he hoped that it would be the forerunner of many similar visits in the future.

Mr. **J. W. Brearley,** Engineer and General Manager of the Swinton and Mexborough Gas Board, and Chairman of the South Yorkshire Gas Group, responded, and said on behalf of the Group how pleased they were to visit Beehive Works, and expressed their grateful thanks to the Directors for their kind hospitality and for the very comprehensive arrangements they had made for their comfort and interest.

Mr. **S. H. Stokes,** Engineer and Manager of the Wath, Bolton, and Thurnscoe Gas Board, supporting Mr. Brearley, commented on the splendid work and progress made by the Company.

After the inspection of the works, the members of the Group were entertained to tea at the works canteen. At the conclusion, Mr. **Brearley,** expressing thanks, said it had been a great surprise to the members of the Group to find that the firm was very much bigger than they realized. The members had been well instructed in all the machinery they had seen, and were most interested in the descriptions given of all the numerous details of the processes carried out. He asked the representatives of the firm to convey to Mr. Goodman their appreciation of the great kindness shown to them, and the regret they felt at not being able to meet him.

Mr. **E. B. Field,** Rotherham, in seconding a vote of thanks, said it had been a real eye-opener to them to see the many ramifications of such an up-to-date works and it had been a real pleasure to accept the invitation of the firm.

Mr. **Crowther,** replying on behalf of the Company, said the firm would be always glad to see them. The Gas Industry could not do without the contractors and the contractors could not do without the Gas Industry. He thought in the future they would have to work closer together for the advancement of the Industry as a whole.

Mr. **F. T. Hatswell,** Wombwell, speaking as a Rotarian, emphasised the value of the personal contact in business, and said if this spirit were encouraged he was sure greater business development would ensue.

While the visiting gas engineers were looking over the works, the ladies made a tour, by saloon coach, of the Dukeries, and on their return took tea at the Riverside Hotel. Thanks were expressed for the hospitable way in which they had been entertained.

RESTORATION AND CONTROL OF THE GAS INDUSTRY IN THE BRITISH ZONE OF GERMANY 1945-1947*

By H. D. GREENWOOD, M.Sc.

PRIOR to the landing of Allied forces in Europe, a staff of officers known as "Civil Affairs" was organized to take over administration in the liberated territories. When German soil was reached, Civil Affairs assumed the rôle of Military Government. As such it became the instrument through which the policy of the Allies was imposed on the conquered Germans, and Military Government detachments were established at all levels of the German Administration. Meantime, a civilian Control Commission was being formed which officially arrived in Germany in July, 1945. Military Government was gradually integrated with the civilian Control Commission, this being completed in 1946 by the appointment of Regional Commissioners who took over the responsibilities formerly held by the Army corps commanders.

At the Potsdam Conference in June, 1945, the boundaries of the four zones of occupation were agreed. The four-power machinery for the control of Germany, known as the Allied Control Authority, was established in Berlin, which was divided into four sectors, each administered by one of the four occupying Powers.

The general policy which has determined the powers and functions of the Allied Control Commission was laid down at the Potsdam Conference. In the Agreement arising from this Conference it was stated *inter alia* that:

"Allied controls shall be imposed upon the German economy, but only to the extent necessary

(*a*) to assure the production and maintenance of goods and services required to meet the needs of the occupying forces and displaced persons in Germany and essential to maintain in Germany average living standards not exceeding the average of standards of living of the European countries (excluding the United Kingdom and the U.S.S.R.);

(*b*) to control German industry and all economic and financial international transactions including exports and imports with the aim of preventing Germany from developing a war potential and of achieving the other objectives named herein."

In addition to the above general principles, the two following clauses directly affect the policy of the control of public utilities in Germany:

(*a*) "Measures shall be promptly taken to effect emergency repair of housing and essential utilities."

(*b*) "At the earliest practical date, the German economy must be decentralized for the purpose of eliminating the present concentration of economic power as exemplified in particular by cartels, syndicates, trusts, and other monopolistic arrangements."

General principles concerning the payment of reparations were specified and were based on the maintenance of a level of industry in Germany which would allow a standard of living as defined above. Other clauses dealt with denazification, the ultimate establishment of a central German Administration, and many other matters.

After the Potsdam Conference tripartite and later quadripartite committees were set up in Berlin. Fuel questions generally were dealt with by a Fuel Committee under whose aegis a Public Utilities (Electricity and Gas) Sub-Committee was formed. So far as gas has been concerned there have been relatively few matters requiring quadripartite agreement, and the work of the Committee has in the main been devoted to electrical problems, since there is a large inter-zonal exchange of electric power.

It is common knowledge that while there have been reasonably free intercourse and exchange between the British and U.S. Zones and, to a lesser degree, the French Zone, the Soviet Zone has been securely hidden behind a closed frontier. The Potsdam clause for the setting up of a central German Administration for the four zones has never been implemented, and while quadripartite agreement has been reached on many matters, the administration and policy in the four occupation zones differ widely and bear the stamp of the national characteristics of the Occupying Power. Recently the U.S. and British Zones have amalgamated to form a common zone, and a German economic Administration is being set up for the combined zone with a Bi-partite (U.S.-British) Control Group to transmit general policy to this Administration. From Jan. 1, 1947, with a few reservations, all executive functions on economic matters have been delegated to the German Administration. The Control Commission officers in the regions into which the Zone is divided have now become inspectors, in which capacity they have no executive authority and can only observe and report to headquarters in Berlin, which is responsible for taking any action necessary.

There have been many criticisms of the initial policy of direct control, and some of these were undoubtedly justified. Although it was intended originally that control of industry, &c., should be limited, the disorganization of the country and absence of any local administration forced the Commission to exercise direct control in order to re-establish industry as quickly as possible.

One of the main objectives of the present policy is to reduce the cost of the occupation to the United States of America and to Great Britain; this will be effected to some extent by the reduced cost of administration, but mainly by increasing production of exportable goods. German economy is at present maintained only by the import of food and materials, the cost of which must in future be met by the export of raw materials and manufactured goods.

Organization and Responsibilities of Public Utilities Branch (Gas Section)

The Control Commission, as originally constituted, included a number of separate divisions, the largest of these being the Trade and Industry Division, which contained 19 main branches, each comprising a group of allied industries. One of these branches dealt with coal, oil and public utilities, the latter being divided into three sections, electricity, gas, and water and sewage.

The Control Commission has its main headquarters in Berlin, where all matters of major policy and those subject to quadripartite agreement are decided. The Berlin Headquarters is situated in the British Sector of Berlin and is separated from the British Zone; the executive control of German industry is, therefore, directed from a Zonal Headquarters at Minden in Westphalia.

Regional headquarters were established in each of the five German provinces or regions, into which the Zone was subdivided—*viz.*, North Rhine (Düsseldorf), Westphalia (Münster), Schleswig-Holstein (Kiel), Hanover, and Hansestadt Hamburg. In order to give the U.S. Zone access to the sea, the port of Bremen in the British Zone was placed under U.S. control.

In the autumn of 1946 the operation "Marriage" took place whereby the Regions of North Rhine and Westphalia were amalgamated to form one "Land." Schleswig-Holstein and Hanover Regions were subsequently designated *Länder* (Lands), making three *Länder* in all, plus Hansestadt Hamburg which has throughout retained its administrative independence. For the purposes of this Paper, however, reference will be made to the five Regions, since the bulk of the information given relates to the period of occupation when the five Regions were separate administrative entities.

The degree of decentralization and the powers delegated to the regional headquarters varied with different industries. The two public utilities, electricity and gas, have, however, always been centrally controlled as far as general policy, allocation of material, repair of plant, &c., were concerned.

It was not until July, 1945, that the gas officers arrived in the Zone. By the end of August the staff consisted of six officers, and during the following six months this was built up to the present establishment

* From Communication No. 312 of the Institution of Gas Engineers.

of 24 officers (excluding clerical staff, &c.). Apart from one or two specialists, the policy in recruitment was to appoint men of general experience, in view of the many and varied problems with which they would be faced, and this policy appears to have been justified. The headquarters staff consisted of six officers, the remainder being distributed over the five regional headquarters.

Provision of suitable staff was an early difficulty to be encountered. In contrast to the electricity section, there were very few senior gas engineers in the Army, while industry at home, seriously short of staff, could hardly be expected to view further depletion with enthusiasm.

In June, 1945, at the request of the Control Commission, a consultative panel, representative of the Gas Industry, was set up in order to provide a channel of communication through which the Commission could consult the Industry on any problem and the Industry could be kept informed of the work of the Public Utilities Branch. A number of meetings have been held which have been attended by representatives of the Ministry of Fuel and Power and of the Industry and at which the latest developments in Germany have been discussed, and the views of the Panel on various problems have been given.

Responsibilities of the Gas Section

The responsibilities of the Gas Section and the control organization required were largely determined by terms of the Potsdam Agreement.

The first and most important problem was the level of production of electricity and gas. In the electrical industry, after discussions lasting many months, quadripartite agreement was obtained, limiting the total capacity in Germany, and the subdivision of this into the four zones of occupation. Proposals were made to limit the production capacity of the Gas Industry on the basis of the pre-war consumption per consumer, but it was impossible to reach agreement on this basis, and it was ultimately decided that adequate control could be maintained through the allocation of coal. It was, therefore, unnecessary to limit the plant capacity and to declare surplus plant available for reparations. The reparations policy has, however, affected the Gas Industry indirectly. As the manufacture of gas-works plant was controlled by other branches (*e.g.*, Mechanical Engineering Branch), it was necessary to maintain a strict vigil to ensure that no plant essential to the Industry was declared for reparations, and this necessitated listing all firms producing plant and materials essential to the Gas Industry. In the absence of any reliable German organization to which reference could be made, this was no small undertaking.

Instructions were received to take all necessary steps to maintain the health of the Occupying Forces and of the civilian population in order to avoid disease and unrest. The first objectives of the Gas Section were, therefore, to effect emergency repairs of plant and services in order to restore gas supply as quickly as possible. It was appreciated that in order to establish a satisfactory control of production and distribution and to ensure as far as possible uniformity of supply to consumers, gas supplies from all sources must be controlled by the Gas Section. The control which was organized therefore included not only gas from gas-works, but also from coke ovens, the latter being supplied either direct to consumers or *via* the grid gas companies or town gas distribution system. As the Gas Section was not responsible for the operation of coke oven plants at collieries and steel plants (which were controlled by the North German Coal Control and the Metallurgy Branch respectively), it was necessary to establish a close working arrangement with both these organizations.

With regard to the production and distribution of public utilities plant and appliances there is a special branch for the electrical industry, but no such branch exists for gas, and plant and appliances are controlled by various branches of the Trade and Industry Division. It was, therefore, necessary for the Gas Section to keep in close contact with these branches. Programmes for repair of works and production of appliances were prepared by the Gas Section, and, subject to allocation of the raw materials required, were then implemented by the controlling branch.

In the initial planning it was proposed that control of the Industry should be effected by allocation of coal and other materials, by control of consumption, and by the establishment of suitable German administrative organizations. It was, however, soon found that the Industry would make little progress without further Allied assistance, as the disorganization following the collapse of the Third Reich was complete. Further, German officials were normally unaccustomed to act without specific instructions and, being uncertain of their position in the early period of the occupation, referred every problem to the regional officers for authority and guidance. The Gas Section was, therefore, compelled to undertake far more detailed administration and control than was originally contemplated.

German Gas Industry Before and During the War*

Before the advent of the Nazi régime, the Gas Industry in Germany had been subject neither to direct Government control, nor to that of any other leading organization.

When the Nazis came to power in 1933, they formed a number of groups (Reichsgruppen) for various industries within the framework of the Ministry of Economics. The Reichgruppe Energie, which covered electricity, gas, and water utilities, was subdivided into "Economy Groups" (Wirtschaftsgruppen), one for electricity and one for gas and water. Membership of the Reichsgruppe Energie was compulsory for all gas and water undertakings. The headquarters of the group were in Berlin, and the country was divided into regions (Bezirken) in each of which was established an office with a local director.

In 1935, a new law for promoting energy economy was introduced, which gave the then Minister of Economics very wide powers of control of electricity and gas undertakings. In many ways the advantages which are claimed by the exponents of nationalization in this country are secured by the powers given in the German Energy Law. For example, an inefficient undertaking can be shut down, and another undertaking can be forced to take over the supply area. The Ministry of Economics had not only power to demand information regarding the technical and economic operation of any utility, but also exercised control over erection of new plant. In the Wirtschaftsgruppe Gas und Wasser were a number of committees dealing with standards of quality, tariffs and prices, and matters of general policy.

In 1941, most of the control of the gas and water industries was ceded by the Ministry of Economics to the newly-formed Reichs Ministry of Armaments and War Production. The Minister (von Speer), later supplanted by Todt, also became Inspector General for Water and Power, controlling the three public utilities, gas, water, and electricity. The work of the Inspector General was carried out by the Department of the State Secretary, which absorbed many of the staff of the Ministry of Economics. The Wirtschaftsgruppen continued their previous function of co-ordination of local information and transmission of instructions from the Inspector General to undertakings through the regional economic offices. The grid gas companies were originally responsible direct to the Inspector General, but during the war the shortage of gas necessitated the introduction of a "supply allocator" in the Ruhr and other areas to ensure the proper distribution of coke oven gas.

Gas Production and Supply

The outstanding characteristic of gas supply in the British Zone is the extensive utilization of coke oven gas. In the Ruhr area, the use of coke oven gas has been widely developed and 73% of the total coke oven gas distributed in Germany was consumed in the British Zone for industrial purposes, and of the total gas distributed by gas undertakings 40% was consumed in the British Zone. Gas supply is an important factor in the economy of the British Zone, and many of the heavy Ruhr industries have been developed on the basis of supplies of cheap coke oven gas. In 1943 sales of coke oven gas to industry, direct and through the grid, were about 80% of the total consumption, and the supply to industry *via* town gas distribution systems was relatively insignificant. Between 1933 and 1939, the consumption of coke oven gas by towns and industries increased by over 350%. Whereas the utilization of coke oven gas was originally developed to utilize surplus gas, by 1938 the industrial requirements, largely due to war industries, had increased so greatly that demands could not be met. From this time to the end of the war, increased gas supplies were obtained by reducing the gas used for heating the ovens by the installation of additional gas producers, by the erection of producers at industrial factories, and by the use of complete gasification plant. Complete gasification made no material contribution to the gas supply in the British Zone.

In addition to the 157 towns with their own gas-works, 53 towns bought from other towns, while 187 were supplied with coke oven gas; this figure includes 24 towns using both town gas and coke oven gas. It will be seen that approximately 50% of the towns in the British Zone were supplied with coke oven gas and that the total consumption of coke oven gas for all purposes was more than 10 times the quantity of gas manufactured by gas-works.

* This subject is dealt with in greater detail in the Author's Paper in I.G.E. Communication No. 299 ("The Gas Industry Overseas, 1939-45"), p. 17.

The position in 1943, which is the last year for which reliable figures are available, is shown in the following table:

TABLE 1.—*Gas Supply (British Zone)* 1943 (1,000 *cu.m. per annum*).*

Region	Number of consumers	Supplied by gas-works	Supplied by coke ovens to towns	Total
North Rhine ...	932,000	166,735	582,449	749,184
Westphalia ...	259,000	99,622	458,631	558,253
Schleswig-Holstein ...	182,000	92,400	46,335	138,735
Hanover	390,000	153,520	144,315	297,835
Hamburg... ...	406,000	265,085	16,757	281,842
Total	2,169,000	777,362	1,248,487	2,025,849

Coke oven gas supplied to industry direct and through the grids	7,021,000
Total coke oven gas supplied	8,269,000
Number of towns with gas supply	373
Number of towns with gas-works	157

As is well known, the Ruhr area probably has more concentrated industry than anywhere else in the world. In this area, lying partly in the Region of North Rhine and partly in Westphalia, lives the bulk of the population of the British Zone. It consumed 60% of the gas distributed by gas-works, and more than 90% of the coke oven gas supplied direct to industry. Outside the Ruhr are a few scattered coke oven plants from which supplies to towns and industries are available. The other Regions, Schleswig-Holstein and Hanover, are very largely agricultural, while Hamburg consists of the town of Hamburg and its suburbs.

The six largest towns in the Zone—*i.e.*, Hamburg, Bremen, Kiel, Hanover, Düsseldorf, and Cologne—were responsible for 46% of the total consumption. Of the larger towns, only Hamburg, Kiel, Brunswick, and Düsseldorf have their own gas-works, the remainder being dependent upon coke oven gas supply.

The figures in Table 2 show that domestic consumption was about 60% of the total gas distributed by gas undertakings, the majority of this being used for cooking.

TABLE 2.—*Analysis of Town Gas Consumption*

Year	Domestic %	Industrial %	Street lighting %
1930	54.0	37.5	8.5
1943	61.5	37.5	1.0

In Germany space heating by gas is insignificant, and gas fires are very rarely seen. It is common practice in Germany to use combined gas and solid-fuel cookers, solid fuel being used in the winter and gas in the summer. This has the merit of levelling the load between summer and winter, the seasonal difference being only 10 to 15%.

Pre-war statistics showed that there were 2.16 million consumers out of a total population of 20.3 million in the British Zone, of whom 550,000 used prepayment meters.

Intermittent vertical chamber ovens were very popular, and a number of different types were in use, principally Didier, Klönne, and Otto. Coke oven plants were in use at only a few of the larger works, Hamburg, Düsseldorf, and Kiel being examples. They were equipped with central mechanical producers, and conformed with best modern coke oven practice. Small horizontal chambers were used in various medium-sized works, while the very small gas-works had horizontal retorts, some hand-charged and some charged with primitive forms of machines. Only one installation of continuous vertical retorts (Koppers) was in operation. It may be said in general that the preference in Germany is for plant of coke oven type, because this is best suited to the coal available. Good quality nut coal has always been scarce, which probably accounts for the fact that continuous vertical retorts are not used to any extent.

Steaming was always practised in works with intermittent vertical chambers. During the war, in order to conserve fuel the calorific value was reduced successively from about 500 B.Th.U. per cu.ft. to 425 B.Th.U. per cu.ft. In February, 1945, all restrictions on calorific value were withdrawn. These reductions were brought about by steaming wherever possible, but dilution with producer gas was also practised. Benzole extraction took place only at the larger works, and even during the war there was little attempt to increase production by the installation of new plants. In the British Zone, only 25 of the 157 gas-works were equipped with benzole plants. Similarly, ammonia was recovered only at the larger works. It is common practice in Germany to use crude liquor as a fertilizer, and many works disposed of their liquor in this way. The large synthetic ammonia plants provided all war requirements, and the output of gas-works was neglected.

Production and utilization of coke oven gas in the British Zone in 1943 is shown in Table 3. The area of the gas grid system extended from the Dutch frontier to Berlin in the east and to Stuttgart in the south. In the British Zone alone there are 2,000 miles of high pressure grid mains. More than 80% of coke oven gas in Germany was produced in the Ruhr, this being obtained from about 80 coke oven plants.

* 1 cu.m. at 0° C., 760 mm. dry = 37.88 cu.ft. at 60° F., 30 in. wet.

TABLE 3.—*Coke Oven Gas Production and Utilization in the British Zone* (1943)

Utilization categories	Million cu.m. per annum
Gas used for heating coke ovens	8,282
Gas used on coke oven plants for boilers, &c.	1,283
Surplus gas for distribution to towns and industry	8,214
Total gas produced	17,779

Coke oven gas was supplied to industry and to towns either direct or *via* the grid gas companies, a contract being made either between the coke oven plant and the consumer, or indirectly *via* one of the five grid gas companies. There are five grid gas companies operating in the Zone, details of which are given in Table 4.

TABLE 4.—*Grid Gas Companies in the British Zone* (1943)

	Grid gas companies				
	Ruhrgas A-G.	Thyssensche Gas- und Wasserwerke G.m.b.H.	Reichswerke Ferngasgesellschaft	Westfälische Ferngasgesellschaft	Vereinigte Electrizitätswerke A-G.
Length of mains (km.)*	1,950	520	483	300	110
Gas supplied in 1943 (million cu. m.)—					
(*a*) To towns ...	558	221	22	56	40
(*b*) To industry...	2,778	801	478	171	109
Total	3,336	1,022	500	227	149

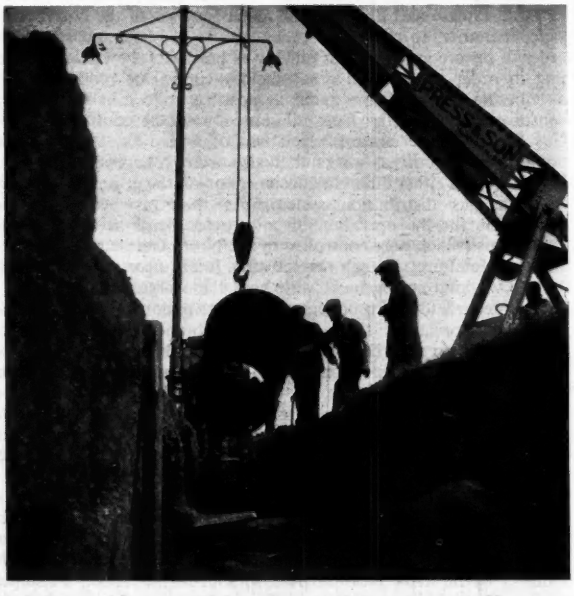
Notes.—(1) The figures for Ruhrgas and Thyssensche Gas- und Wasserwerke include gas supplied in bulk to the Westfälische Ferngasgesellschaft and Vereinigte Electrizitätswerke. This gas is also included in the quantities distributed by these companies.
(2) In addition to the coke oven gas supplied to towns by the grid companies, a number of towns (15 in all) buy gas direct from coke oven plants. This amounted in 1943 to 346 million cu.m. per annum.

It will be noted that the Ruhrgas A-G. is by far the largest company, and, prior to the collapse, obtained its gas from 60 coke oven plants. The Ruhrgas A-G. supplied over 90% of its gas within the boundaries of the British Zone, the remainder being consumed in the U.S. and French Zones. The Reichswerke Ferngasgesellschaft was formed to distribute gas from the Hermann Göring Steelworks near Brunswick, and during the war supplied up to 1 million cu.m. per day to Berlin, a distance of 240 km.* The Vereinigte Electrizitätswerke and the Westfälische Ferngasgesellschaft are relatively small concerns, both of which bought the bulk of their gas from the Ruhrgas A-G.

(*To be continued*)

* 1 kilometre = 0.62 mile.

G.L.C.'S NEW MAIN



Some 6,000 yards of 36 in. main are being laid on the Chertsey arterial road between Richmond and Twickenham by contractors for the Gas Light and Coke Company. Excavating is done by an Allen Parsons multiple-bucket excavator, and shown above is a 3½-5 ton Ransome Rapier petrol electric mobile crane.

BRITISH GAS COUNCIL IN ACTION

EXTRACTS FROM THE SECOND ANNUAL REPORT

The second annual report presented at the annual meeting of the British Gas Council on June 30 records that company and municipal undertakings making over 97% of the total output of gas in the United Kingdom have been admitted to membership, including 37 undertakings not previously members. Below we give extracts from the report.

THE subscription rate is not being increased for the year 1947-48. This will prevent the Council from meeting the demand for the extension of its work and may restrict some of its former activities. The problem is accentuated by the difficulty of securing the services of officers and staff qualified to undertake the specialized duties involved and by the lack of accommodation. These factors together prevent full advantage being taken of the opportunities for replanning and the completion of a centralized administration presented by the substitution of the British Gas Council for the two former bodies. Nevertheless, the administrative services of the Council have continued to be extended to—among other bodies whose activities continue to increase—the Conjoint Conference of Public Utility Associations, the Federation of Gas Employers and the National Joint Industrial Council for the Gas Industry and for the London District Organization of the British Gas Council.

Nationalization of the Gas Industry

The Council accepted the invitation of the Ministry of Fuel and Power to set up a Joint Consultative Committee of the Ministry and the Council to consult with the Department, without prejudice to the freedom of action of the Council to oppose the principle of the nationalization of the Gas Industry, as to the detailed implementation of the Government's nationalization proposals. The Council agreed that its representatives on the Joint Consultative Committee should be the 15 persons elected to be members of the Executive Committee for 1946-47, from which a panel of seven members was subsequently appointed, at the request of the Ministry, to facilitate and expedite the consultations.

At the first meeting of the Joint Consultative Committee the representatives of the British Gas Council suggested that a Central Gas Authority should forthwith be established to ensure the development of the Industry, irrespective of its future ownership. In rejecting this proposal, the Ministry in December, 1946, invited the views of the Council on "the major questions of broad policy" regarding the "planning of the future organization of the Industry under the Government's proposals for nationalization. Such questions include the broad geographical lay-out of regions, or other local organization, including the question whether the regions suggested in the Heyworth Report or some alternative lay-out would be the most appropriate and efficient form of organization, the degree of de-centralization which might be desirable within the regions, and relationship between any Central Authority, if one is needed, and the Regional or other Local Organization."

Notes—But not a Plan

A preliminary draft of "Notes on the Organization of a Nationalized Gas Industry" was communicated to the Ministry on Feb. 11, but their detailed discussion was postposed by the Ministry owing to the fuel crisis. Nevertheless, consideration was given by the Council to the amplification of the notes and a survey was undertaken to determine the geographical areas appropriate to an integrated Gas Industry. As a result "Further Notes on the Organization and Regional Boundaries of a Nationalized Gas Industry" were approved by the Central Board on June 10 for communication to the Ministry, in response to its request, as representing the tentative views of the Council and without prejudice to its opposition to nationalization, for the accomplishment of which the Council was not to be regarded as having submitted a Plan. The "Notes" and "Further Notes" are being sent to member undertakings and are under discussion by the Joint Consultative Committee. Recent reports that the Gas Bill would be postponed until the 1948-49 Session have not been denied, but the drafting of the Bill is proceeding.

As a result of negotiations with the Ministry of Fuel and Power, the following assurance regarding capital expenditure incurred by gas undertakings during the interim period before the proposed nationalization of the Gas Industry was accepted by the British Gas Council on Sept. 17:

(1) An assurance is given on behalf of the Government that, in the assessment of compensation on nationalization, the proprietors of undertakings will neither gain nor lose by reason of undertakings having incurred, between Jan. 1, 1946, and the vesting date, capital expenditure on schemes for development or extension approved by the Ministry of Fuel and Power.
(2) The terms and conditions on which monies are obtained by undertakings for expenditure under (1) to be approved by the Ministry of Fuel and Power.
(3) Where undertakings have exhausted their statutory capital powers and/or borrowing powers, the Ministry of Fuel and Power will approve the necessary extensions of these powers.

This assurance being in general terms, the Ministry undertook to give careful consideration to difficult cases submitted by the Council or member undertakings, for example, where interest on capital expenditure would normally be charged to revenue. As a result an interpretation of the assurance has been formulated by the Ministry and is under consideration by the Council.

Nationalization of the Electricity Industry

The Electricity Bill, the purpose of which is to transfer the electricity supply industry to public ownership, provides that, *inter alia*, the present Central Electricity Board, power companies, holding companies and all generating stations and main transmission lines shall vest in a Central Authority, while other authorized undertakers, whether company or municipal, shall be transferred to one of 14 Area Boards.

Owing to its importance as affording precedents for the proposed Gas Bill, the proceedings on the Electricity Bill have been and are being watched in detail in Parliament and the main amendments proposed by the electricity industry have received the general support of the Council.

Attention of Members of Parliament and the Public has been drawn to the provisions in the Bill whereby the stock of electricity supply companies is to be fixed at the Stock Exchange valuation on certain prescribed dates, whereas the value of British electricity stock to be issued as compensation is to be based on the market value of Government securities at the date of issue. It is inequitable that electricity stockholders should be forced to part with their securities at prices depressed by the threat of nationalization, in return for quasi-Government securities inflated by the Government's "cheap money" policy.

An amendment was moved to the provision in the Bill whereby undertakings supplying both electricity and gas would vest in the appropriate Area Board. Designed to permit such an undertaking to retain its gas supply, the amendment was negatived, but the Minister of Fuel and Power undertook to reconsider the definition in the Bill of an "authorized undertaker," which at present embraces an electricity and gas undertaking.

It having become apparent that the Government did not propose to nationalize non-statutory electricity companies, but to make any such company an ex gratia payment of unspecified amount should it be compelled to wind-up, the Council has made representations with a view to ensuring that non-statutory gas undertakings shall be included in the proposed Gas Bill.

Nationalization of Transport

As with the Electricity Bill, the Council is interested in the Transport Bill as constituting a legislative precedent for the transfer of industry to public ownership. Liaison has accordingly been maintained with the Railway Companies' Association and the various road transport and haulage organizations, which have supplied copies of their annotated amendments for consideration by the Council. The application of the provisions of the Bill to "C" licence holders, would have made it illegal, in certain circumstances, for a public utility undertaking, without permission, to operate its own vehicles for its own purposes within its statutory limits. Representations made led to the exclusion of "C" licence holders from the Bill.

Nationalization of the Coal Industry

Under the Coal Industry Nationalization Act, 1946, the ownership of all colliery companies and their ancillary undertakings was vested in the National Coal Board on Jan. 1. Although, during its passage through Parliament, the Government resisted major amendments to the Bill which it deemed would hamper the discretion and independence of the National Coal Board, the following were among the modifications secured:

(*a*) The obligation of the National Coal Board to make available supplies of coal in such quantities as might further the public interest was extended to include qualities and sizes, and the Board was prohibited from granting any undue or unreasonable preference or advantage in respect of coal supplies.

(*b*) One of the main criticisms of the Bill being that little or no machinery existed to give effect to recommendations by made the Industrial or Domestic Coal Consumers' Councils, the Government was induced to provide in the Bill that the Minister might give the National Coal Board such directions as he might think requisite for remedying any defect disclosed in the general arrangements of the Board.

(*c*) The Minister was placed under obligation to consult representative bodies before appointing members to the Industrial Coal Consumers' Council.

(*d*) Provisions were inserted in the Bill to ensure that the accounts

of the National Coal Board should conform with the best commercial standards and distinguish the colliery activities from each of the main ancillary activities of the Board.

Coal and Oil

In July, 1946, the attention of the Ministry of Fuel and Power was directed to the possibilities of interrupted gas supplies during the winter if gas coal stocks were not maintained at a satisfactory level. Although some coal was diverted to gas undertakings from other consumers, the Ministry found it necessary to require that the extraction of benzole be reduced, that the marking of carburetted water gas from oil be increased and that the use of oil be further developed by carbonizing oil in horizontal retorts and other processes. The response was satisfactory. Nevertheless, the average stock of coal on gas-works was only equivalent to 3.2 winter weeks' consumption at the beginning of November.

The stock position continued to deteriorate and, during the fuel crisis in February—when electricity supplies were curtailed and the industrial, commercial, and domestic life of the national was seriously dislocated—the average stocks of gas coal declined to 1.6 weeks' consumption. This dangerous level was not, however, accompanied by any cessation of gas production. Moreover—despite shortages of labour, plant, and materials, unsuitable and dirty coal, and transport difficulties and in the face of maintained demand—gas undertakings reduced their consumption of coal by 12.1% during the 10 weeks ended May 2 over the 10 previous weeks, excluding Christmas week, which represented a saving of 625,000 tons of coal. During the 26 weeks ended on that date, the demand for gas had increased by 10.65%, to meet which the use of oil was increased by 55.14%, but the consumption of coal was increased by only 5.14%. Efforts are now being made to bring the average coal stocks up to 6 weeks' consumption by the beginning of winter, to achieve which the current Fuel Economy Campaign of the Government is inteded to help.

Increased Oil Consumption

At the request of the Government, the Gas Industry has continually increased its use of oil for gas making in order to save coal, despite the fact that the costs of production are appreciably higher and that for every ton of coal not carbonized, half a ton of coke is lost to the market. During the last three years the Gas Industry has raised its consumption of oil by 110% and this, it was estimated, would be increased to 190% during the current year. This would have meant that gas-works would save 6½ million tons of coal this year by using instead no less than 216 million gall. of oil. In June, 1947, however, the Ministry of Fuel and Power requested gas undertakings to reduce the amount of oil used for making carburetted water gas, in order to increase coke stocks, which have continued seriously to decrease with the extension of the use of oil, increasing supplies of which cannot be made available. While, as a matter of expediency, the substitution of oil for gas making materially decreases the Gas Industry's demand for coal, it must not be overlooked that the economic life of the nation will not be completely restored until full use is made of the country's coal resources.

The National Coal Board having taken over from the Ministry of Fuel and Power the allocation and supply of coal, the Public Utilities Coal Committee—which regularly met to advise the Ministry in these and ancillary matters—ceased to exist on May 1, while the Utilities Coal Joint Committee—representing the Mining Association and the Conjoint Conference of Public Utility Associations—was disbanded on Jan. 1, its duties of mediation between consumers and producers in difficulties as to coal quality having become the responsibility of the Industrial Coal Consumers' Council, set up by the Coal Industry Nationalization Act, 1946.

The National Coal Board, having been made aware of the necessity for the formulation of a coal price structure under which prices would be graded according to quality, has given an assurance that the adoption of a scientific price policy was regarded as an important and urgent task, in which the co-operation of public utility undertakings was desired. As to the deterioration in the quality of coal and the presence of dirt and foreign substances, the National Coal Board has expressed its intention of securing progressive improvement in coal quality and of using to the maximum and extending washeries and dry-cleaning plant. Standard conditions of contract are being prepared by the National Coal Board in consultation with the public utilities; in the meantime, arrangements existing prior to the nationalization of the coal industry are to be observed. Gas, electricity, water, and transport undertakings consume at least 40% of the coal used for industrial purposes, or 25% of the total mined coal of the country. Such utilities have asked, therefore, for adequate representations on the Industrial Coal Consumers' Council.

Plant and Materials

Delay in the erection of plant necessary to make good replacement and extension arrears, continues to increase, while shortages of materials do not decrease. The difficulties thus created are the source of continued representations by the Council to the Ministries concerned. Gas mantles remain in limited supply and the use of paint has been restricted, both owing to lack of labour and raw materials. The production of gas meters has recently been considerably reduced owing to the decreased allocation of steel plate. Shortages of materials are frequently due to makers being unable to secure adequate fuel supplies and transport, concerning which the Council has secured, in some instances, the necessary priorities.

Negotiations have continued concerning the difficulty of maintaining gas supply owing to the increasing shortage of iron, steel, and fireclay, silica and other ceramic materials necessary to the production, distribution and utilization of gas. While first priority has been accorded to the supply of iron and steel for use on gas-works, such priority does not extend to requirements for distribution and utilization purposes. Iron and steel for use before and after the meter are accorded the necessary authorizations to acquire by the Ministry of Fuel and Power, but it is frequently impossible to secure the permitted supplies within the period prescribed. The shortage of tubes and fittings which arises is prejudicial to the safe maintenance of installations and to the execution of the housing programme.

The inadequate production of ceramic materials makes it difficult to extend gas making plant, or to maintain it in the condition necessary to secure efficiency and economy in the processing of coal, oil, and coke. In the utilization of gas, waste is occasioned where appliances cannot be kept in efficient order owing to the absence of cermaic components. The Council will continue to make its representations as to all shortages to the production authorities concerned, so as to secure for gas undertakings the maximum supplies available under conditions in which the demand for materials of all kinds is considerably in excess of output.

Taxation

Purchase Tax: The re-imposition, on April 15, of purchase tax on domestic gas and electricity appliances, as an alleged deterrent to the consumption of gas and electricity, was immediately challenged by the Council and a case for the exemption of gas appliances from the tax was submitted to the Chancellor of the Exchequer and communicated to the Ministry of Fuel and Power and other Government Departments concerned. On June 17 the tax was removed, retrospectively to the date of its re-imposition, on cooking appliances, wash boilers and irons. Further representations are being made by the Council with a view to securing exemption from the tax of water heaters and certain other gas appliances.

Excess Profits Tax: In the case of the Great Wigston Gas Company, the Court of Appeal reversed the decision of the High Court that, in computing liability for excess profits tax, the Inland Revenue was not entitled to make notional deductions in the standard period, where wear and tear allowances had been granted only in the chargeable period. The Court of Appeal decided that, although excess profits tax computations were subject to income tax principles, the Crown was not bound to accept income tax assessments for excess profits tax purposes. The new points thus raised being of interest to but a limited number of undertakings, the Council decided not to appeal to the House of Lords, but to negotiate with the Board of Inland Revenue, with the result that a satisfactory settlement was arranged. The Excess Profits Tax Committee of the Council has initiated negotiations with the Inland Revenue to secure the exemption from excess profits tax liability of sums held in suspense during the war to meet deferred repairs.

Income Tax: A large number of inquiries have been received from member undertakings during the year regarding the new system of depreciation and obsolescence allowances granted under the Income Tax Act, 1945. Rulings have been obtained from the Inland Revenue on certain points at issue between undertakings and local Inspectors of Taxes.

Profits Tax

Profits Tax: The Finance Bill, 1947, proposes certain changes in the rate of profits tax, which is the successor to the now extinct National Defence Contribution. The exemption of statutory undertakers from National Defence Contribution has been extended to the profits tax.

Rating and Valuation: In December, 1946, the Minister of Health indicated that it was the intention of the Government to introduce legislation to amend the machinery of rating assessment, apparently involving the establishment of some centralized authority with jurisdiction over local Assessment Committees. Attack having been made on the profits basis of assessment, particularly by members of the Incorporated Association of Rating and Valuation Officers, special attention is being given by the Council to rating matters.

In January, 1947, the case of Yeovil Rural District Council *v.* South Somerset and District Electricity Co., Ltd., the Court of Appeal, by a majority, reversed the decision of the Divisional Court that, in assuming the rateable value as a whole of a public utility undertaking, a deduction must be made of the amount of excess profits tax payable by the undertaking.

Stamp Duty: The case of the Attorney-General *v.* Northwood Electric Light and Power Co., Ltd., is of considerable interest to gas undertakings. It was held that a card maintained upon the premises of a prepayment meter consumer, which did not become the property of the consumer, was not liable to stamp duty as a receipt "given to the consumer" whatever the amount recorded thereon.

The Gas (Charges) Order, 1942, under which permission of the Ministry of Fuel and Power is required for any increase in gas prices,

frequently involves application for revision of Maximum Price or Standard Price (Sliding Scale) provisions, while the restrictions imposed on gas undertakings electing to operate the Gas (Maximum and Standard Prices) Order, 1942, include a prohibition against the payment of a dividend exceeding the average of the three pre-war years, less 1%. The Orders are, therefore, of little assistance to gas undertakings desiring a general revision of the price and dividend control provisions, which revision it is the policy of the Ministry not to grant, except in cases of exceptional hardship. Nevertheless, the Council has advised member undertakings not to withhold applications for such revision as is considered necessary and the Ministry has suggested a modified preliminary procedure to ascertain its views.

War Damage

Considerable progress has been made in the protracted negotiations with the Treasury and the Ministry of Fuel and Power regarding the information to be provided by public utilities for the purpose of computing the global amount of war damage suffered, the form of the detailed claims for compensation to be rendered by individual undertakings and the bases upon which contributions are to be paid by undertakings. The Government appreciates that inconvenience has been caused by the inevitable delay involved and has expressed its intention of introducing the necessary legislation at the earliest opportunity.

Fuel Restrictions

The shortage of coal and plant during the winter resulted in the frequent curtailment of electricity supplies, culminating in the compulsory prohibition of the use of electricity, except for essential or specified purposes, during stated hours daily in February, March, and April. The Government requested reduction of gas pressures as necessary to meet the situation in each area of supply and subsequently required gas undertakings to lower their consumption of coal by 10%, the successful outcome of which has been noted. The situation became critical during February, when exceptionally severe weather was experienced, resulting in the dislocation of the industrial, commercial, and domestic life of the nation. Although the coal stocks of gas undertakings fell to an average of 1.6 winter weeks' consumption and the difficulties were formidable, gas production was maintained, but there were intermittent reductions of pressure in London and some other parts of the country. Advance arrangements—known as "BGC Plan A47"—were communicated by the Council to all gas undertakings, against the possibility of the discontinuance of gas supplies to industrial and commercial consumers, other than essential services and of street lighting. The cessation of street lighting was subsequently ordered by the Government, but it was not found necessary to bring the remainder of the Plan into operation.

The Council maintained continuous liaison with the Ministry of Fuel and Power, the other Government Departments involved and the National Coal Board. The active co-operation thus established proved advantageous to all concerned. As a result of representations made, the Council was able to ensure that compulsory restrictions were not placed on the use of gas, as appeared to be intended. Attendance at the Press conferences of the Ministry of Fuel and Power was accompanied by the regular issue by the Council of Press statements. These, while insisting upon and giving guidance as to economy of consumption and the need for co-operation, had a re-assuring effect upon the public, which on one occasion was alarmed by an official statement—promptly and successfully challenged by the Council—that the gas supply situation had become extremely critical.

A National Policy

The circumstances leading to the fuel emergency, which has not terminated, emphasized the need for the adoption of a national fuel policy which would, in the interests of coal conservation, ensure the best use of gas and electricity. The Council accordingly recommended the Ministry of Fuel and Power to initiate an enquiry with a view to establishing such a policy.

The Council, being of opinion that the compulsory rationing of gas was not in the best interests of the nation, made representations accordingly in connexion with the consideration which the Ministry of Fuel and Power gave to the measures to be taken to reduce the consumption of gas and electricity, on the removal of the remaining restrictions on the use of electricity at the end of April. The Ministry ultimately adopted a Fuel Economy Campaign, under which domestic consumers were urged to reduce, during the five summer months, their consumption of gas and electricity by 25%, instead of 10% as suggested by the Council and space heating was prohibited, which the Council had deprecated.

The full co-operation of the Council has been and is being extended to the Government in its Fuel Economy Campaign and member undertakings have been recommended to assist to the utmost of their available resources. In addition to limited Press advertising, the Council put into production fuel economy posters, leaflets, booklets, and lantern slides, and is distributing to gas undertakings the publicity material of the Ministry and of co-operating women's and other organizations. A film on meter reading is being produced by the Council to supplement those of its films which bear on fuel economy, while member undertakings are affording guidance and giving demonstrations to consumers in support of the campaign, with particular reference to the economical use of gas and the care of appliances.

Domestic Gas Development

The Council is consulted by Government Departments in housing matters and is given opportunity, at the drawing-board stage, to suggest revisions to plans for the erection and equipment of new and the conversion of existing dwellings. Standard gas installations and uniform installation costs have been agreed, while Standard Specifications for certain gas cookers and wash boilers have been agreed with the Ministry of Supply, these appliances being subjected to British Standards Institution tests by the Council before approval. Laboratory tests have been made for the Government on various appliances and other items and considerable experimental technical research has been undertaken on the use of new materials, on non-traditional methods of house buildings, and on the prefabrication of plumbing and other units.

Many other aspects of the development of gas for domestic purposes have been under review. A specification for a gas cooker suitable for rental and prepayment consumers has been agreed and is under consideration by the manufacturers; an exchange has been arranged between undertakings of information on improvized ways and means of surmounting material shortages, in particular of replacement parts for the repair of appliances. The scheme evolved by the Council for the distribution of gas cookers and meters, which exempted these appliances from the official machinery set up for the control of building materials and components, has continued to operate advantageously.

The Domestic Gas Development Committee—together with its District Committees, Technical Sub-Committee, and Joint Consultative Committee with the Manufacturers of domestic appliances—afford machinery whereby national and district agreement can be secured in matters relating to the development of the domestic uses of gas and coke. Communications on the activities of the Committee, technical information, and date for use in negotiations with local authorities, have been regularly circularized among member undertakings.

Home Service

The immediate aim of the Home Service Section of the Council is to recruit home service personnel to pre-war strength; the ultimate goal is to have appointed one home service adviser to every group of 10,000 consumers. During the past year a number of appointments have been made from the Demonstrators' Panel of the Council, but many vacancies remain. Liaison is maintained with the Ministry of Labour Appointments Board, the Domestic Science Colleges, Employment Bureaux, the Good Housekeeping Institute, and other likely sources for the recruitment of qualified personnel. A leaflet on the training, qualifications, and work of a home service adviser, has been widely distributed, while editorial articles on the openings for women in the Gas Industry have been written for a number of journals and for inclusion in reference books on careers, on which lectures have been given to careers mistresses and others interested. During the year a National Conference of Gas Demonstrators was held and refresher courses have been inaugurated.

Co-operation with the Government Departments continues, with particular regard to facilitating the support by member undertakings of the various official campaigns directed to the housewife. Material for posting on the Ministry of Food's information boards, displayed in 600 gas showrooms, has been circulated regularly, while the "Home Service" Information Sheet, for which more contributions are being submitted, continues to be published. Services have been afforded to gas undertakings in connexion with kitchen planning, exhibitions, demonstrations, lectures, speakers, and literature, and on many other matters relating to domestic consumer relationship.

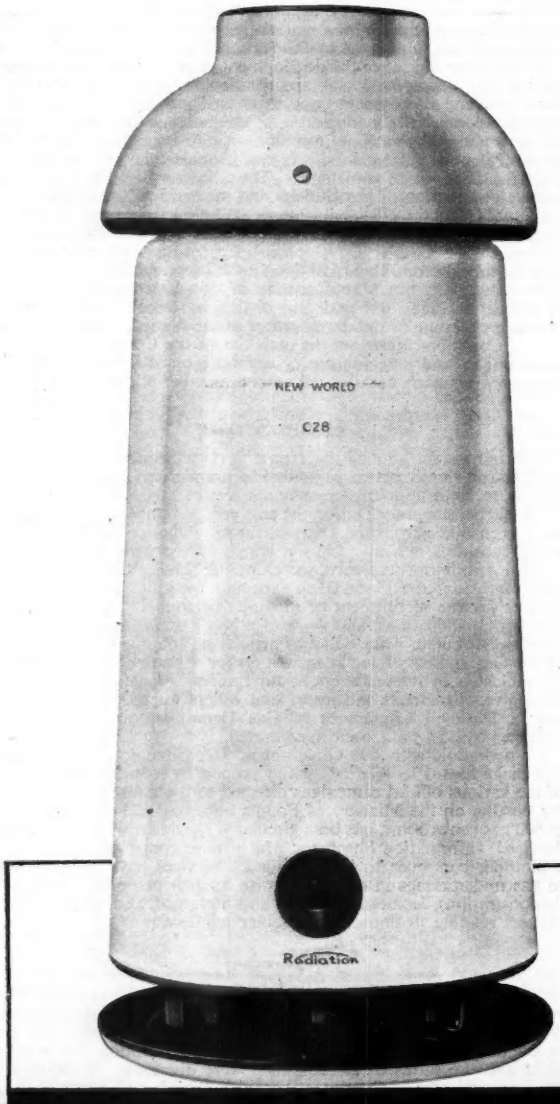
Salesmen

All District Gas Salesmen's Circles have now resumed their activities and the majority completed a full programme during the year. A conference of the Chairmen and Secretaries of the Circles was held in London, when matters relating to their organization and development and the status of gas salesmen were discussed. Following on the approval of a report from the Sales Training Committee of the British Gas Council, the Institution of Gas Engineers and the Ministry of Education, regulations have been agreed for the training and education of gas salesmen, leading to the award, in conjunction with the Incorporated Sales Managers' Association, of a Certificate in Gas Salesmanship and Consumer Service.

Industrial Gas Development

Development activities at the eleven Industrial Gas Centres include a continuation of work carried out on the concentrated combustion burner, for which plant is being manufactured for commercial use, the permeable lined furnace, and the application of radiant heat to industrial processes. Other work comprises the development of a direct-fired air heater for the processing of photographic paper; a stress relieving furnace for dealing with vessels up to 66 ft. in length; galvanizing baths; the application of infra-red to textile drying and processing; the precision casting of alloy steel engine components, using

CUTTING DOWN



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the "lost wax" or "investment" process; varnish manufacture; and the tempering of hardened cutlery knife blades. Technical matters discussed cover such subjects as powder metallurgy; the heat pump; church heating; the use of gas in the textile trade; the Home Office Memorandum on the "Design and Safe Operation of Gas Heated Ovens and Furnaces"; overhead radiant heaters; coal conservation; gas carburizing; submerged combustion; nitriding; and bread baking. Recommendations for research on immersion heating and burner design have been made to the Gas Research Board.

Quarterly Reports have been issued dealing with the heating of moulding powders; measurement of temperatures by thermocouples; stoving of plastic material prior to stamping; drying of wire healds; clay drying by radiant heat; platen heating for plastic moulding; wire patenting; and pasteurization of milk in the churns. Technical information and photographs have been provided for industrial gas advertising. A new publication in the "Industrial Uses for Gas" series, "The Control of Temperature in Gas-fired Plant," has been released, and a book on radiant heat drying by gas is about to be issued. Members of the Centres have given and in future will be giving papers before various organizations on industrial gas subjects. The Industrial Gas Development Committee, in conjunction with the Exhibitions Committee of the Council, organized the "Gas in Industry" exhibit at the British Industries Fair at Castle Bromwich, and the "Infra-red Heating by Gas" exhibition at Gas Industry House.

A Joint Consultative Committee, consisting of four representatives each from the Industrial Gas Development Committee and the Society of British Gas Industries, has been formed, with a view to ensuring closer co-operation in technical matters arising from the manufacture of industrial gas appliances. Discussions have taken place with representatives of the Bakery Equipment Manufacturers' Society, regarding the use of gas for bread baking generally.

Publicity

The continued shortage of coal, plant, labour, and materials, the Government's call for fuel economy and the possible introduction of rationing, render impossible the maximum development of the production and sale of gas, coke, and appliances. Consequently the publicity policy of the Council has been increasingly based upon the maintenance of prestige and confidence, the dissemination of information, the elimination of discrimination against gas and the avoidance of stimulation of consumer demand, which is normally the fundamental objective of publicity. These difficulties have been coupled with shortages of paper and publicity materials, lack of editorial and advertising space and inadequate revenue.

Such adverse conditions have led to the elimination of general advertising in the newspapers and greater concentration upon exhibitions, films, and publications, supplemented by increasing editorial activities, which includes the widespread distribution of news and information. Such media is more readily adaptable to the long term policy of maintaining the competitive position and popularity of gas service and to keeping before the public its amenities and advantages and the foremost part it plays in the national fuel economy. The active co-operation of undertakings in and their reinforcement of the publicity work of the Council is extending. But, in this connexion, much remains to be done, despite the threat of nationalization, if the services and media made available are to be exploited to the utmost and at the lowest possible cost and if the goodwill which the public at present extends to the Gas Industry is to be consolidated.

The Council has exhibited prominently during the year at 22 national exhibitions.

Films

It is estimated that the Council's films were seen by nearly half a million persons, during the past 12 months. The success of films, however, is not necessarily measured by the size of the audience, the composition being frequently of greater importance. Government Departments, local, education and housing authorities, learned societies and the Services are among the important bodies which have requested the use of Gas Industry films, which have been loaned to the Governments of Australia, Canada, New Zealand, the United States of America, Russia, Sweden, and Denmark, and the Control Commission in Germany. The films appeal by reason of the instructional and entertainment value; they portray the importance and prestige of a national public service; and they are productions of technical merit, free of excessive advertising.

Films loaned to borrowers during the year reached the record figure of 6,000 reels. Mobile units—comprising projectors, apparatus, operators and films—toured the country for the first time, showing (in co-operation with member undertakings) complete programmes to selected audiences. In nine months 1,125 shows were given to audiences totalling 143,823 persons. The programmes were well received, especially in schools, while undertakings and those otherwise concerned appreciated the comprehensive nature of the facilities afforded. The service is being continued and extended.

Nine films are in production, including one on (meter reading in support of the Government's Fuel Economy Campaign, twelve have been added, five have been revised and six have been withdrawn. Film strip will shortly be made available. As pioneers in the development of documentary films, the Council is making every effort to ensure the continued production of films of high standard, so that the maximum advantage may be taken of the publicity which attaches to this form of visual entertainment and education.

Publications

Books published by the Council during the year included "Training in Homecraft," which contains suggestions for lesson planning, and "The Vital Flame," by Compton Mackenzie, being an account of the development and present activities of the Gas Industry," with illustrations in colour photography. "The Vital Flame" was well received by the Press and its recipients and 12,000 copies have already been distributed. In course of production are, a book for children, "Pictures in the Fire," a book for adolescents, and a book for housewives on homecraft.

Booklets, leaflets and other publications produced by the Council covered such subjects as gas in industry and schools; the design of gas appliances; kitchen planning; consumers' freedom of choice; the equipment of temporary houses; cooking, recipes, jam making and fruit bottling; street lighting; fuel economy; and the prize-winning houses built in connexion with the competition organized by the House Building Industries Standing Committee. Special publications were issued in support of exhibitions organized by the Council, or in which it, or member undertakings, participated.

A well-equipped photographic section has been established and the Council's library of photographs is being built up again. Photographs are provided for the publicity work of the Council and can be obtained by the Press on demand on almost any subject relating to gas manufacture, distribution, and utilization. This service is available to member undertakings, whose own photographs can be enlarged for display purposes and for whom camera work can be undertaken. Member undertakings, contractors, and others are invited to add to the library by sending photographs of interest to the Council.

Lectures have been given on 334 occasions to schools and national and local organizations, for which speakers are arranged on request. The Lectures Notes of the Council have been revised and extended and now provide for 12 lectures. The information service of the Council has become increasingly important, largely as a result of extended publicity activities. Enquiries by correspondence and telephone and from callers, on innumerable subjects, are received from all sections of the community and are frequently accompanied by requests for literature, visual aid material and statistics.

STRETFORD'S SILVER JUBILEE

Celebrating the 25th anniversary of the undertaking, the Stretford and District Gas Board made a tour of inspection of the works, when the party—which included three members who were present at the inception of the undertaking—saw many new innovations.

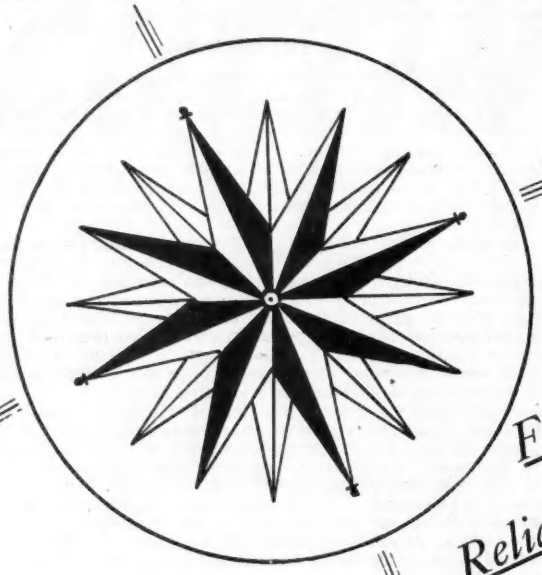
Among these was a new training centre, which is to become the most up-to-date of its kind in the North. At this centre, many employees of the works, including sales managers and gas inspectors, are to receive specialized technical and theoretical training. Among the things taught will be instructions on "human relations" to keep up the good name of the Board with local housewives. Inspectors will receive training in the psychological approach to housewives and in professional etiquette. Sales managers will be taught the art of giving cookery hints. In this way, when a new cooker is installed and complaints are received from the housewife that her food is being spoilt, the manager will be able to diagnose whether it is a fault of the cooker or a simple fault—such as temperature regulation—which can be corrected by the housewife.

At present 44 employees are receiving training under a qualified technician. People from gas undertakings outside the town are to be included in the scheme. Attending for one day a week they will receive training embracing every type of new equipment. Refresher courses are to be given to employees whose apprenticeship was interrupted by war service, and also to some of the older hands.

There has been a great extension of the "Make do and Mend" workshops which were started in war-time to provide replacements of material that was difficult to get. Here, fitters and welders and other engineers are making spare parts that are still too difficult to obtain, or which are being produced outside at high prices and low quality. In addition a lot of specialized equipment is being turned out for Trafford Park firms who use gas in their processes. The meter repair department has come into prominent with difficulties of replacement, and now occupies a position of first rate importance.

Members were also interested to see the working of a new transformer which stepped-up 400 volts A.C. to 30,000 volts D.C. The selenium rectifier was an innovation, as was a new safety device, which ensured that employees could not gain admission to the transformer without first lifting an unearthing switch.

Difficulties in the replacement of furnaces were described to members, when it was revealed that the supply of silicon would regulate the speed with which furnaces could be replaced.

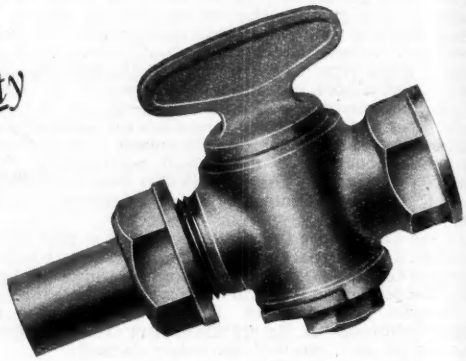


CARDINAL POINTS

Quality

Finish

Reliability



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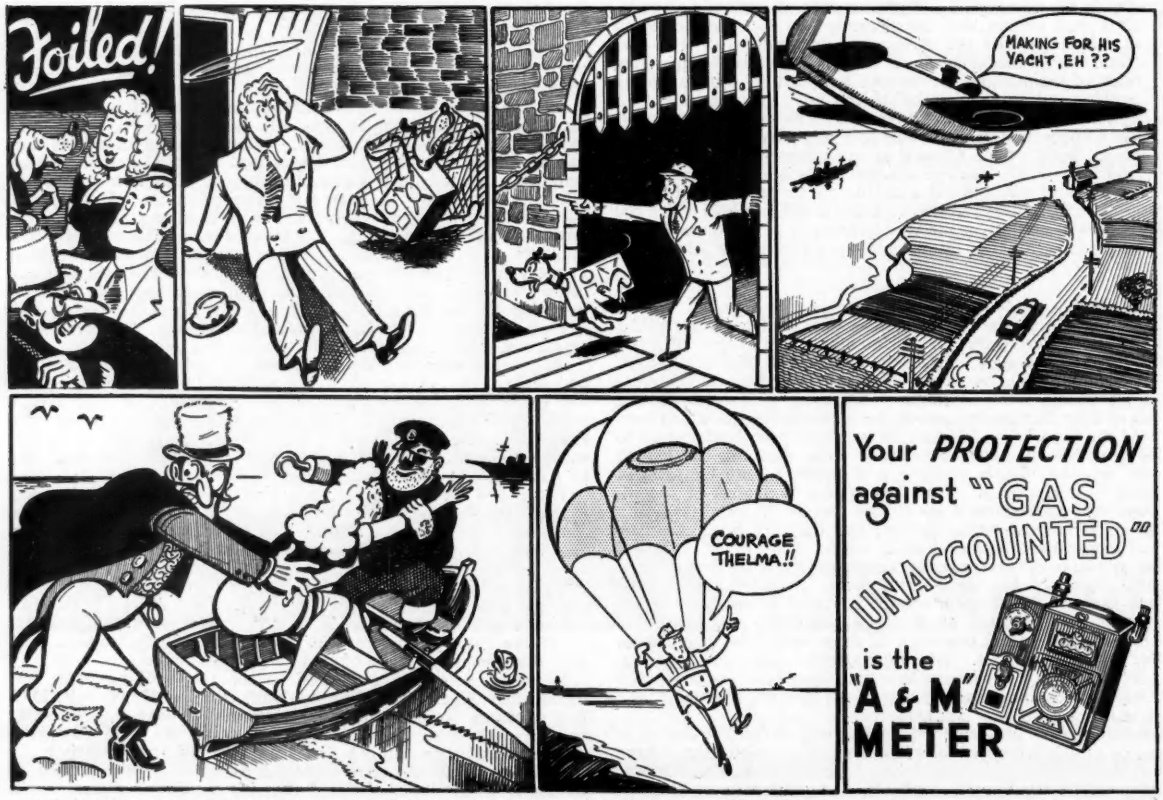

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GAS UNDERTAKINGS' RESULTS

Glasgow Gas Department.—The financial results of the year ended May 15 show a deficit of £17,193, whereas the estimates presented last August showed a probable deficit on the year's working of £20,800 due to the fact that the increase of 3d. per 1,000 cu.ft. in the price of gas would only be effective for six months of the year. The financial position is as follows: Gross revenue (1946-47), £3,269,848; gross expenditure, £3,287,041; deficit, £17,193; less accumulated surplus brought forward, £799; accumulated deficit carried forward to 1947-48, £16,394. Gas revenue amounted to £2,263,748, the average price received per 1,000 cu.ft. being 3s. 8.259d. The sale of gas last year amounted to 12,304 million cu.ft. as against 11,978 million cu.ft. for the previous year—an increase of 326 million, or 2.721%. In the pre-war year 1938-39 the consumption of gas was 9,905 million cu.ft. Net revenue from coke amounted to £869,371—an increase of £89,000 over the estimate—the average price for sales being 42s. 7d. per ton as against the previous price of 42s. 5d. Net revenue from chemical by-products was £82,601, against the estimate of £100,000. The severe winter conditions of the first few months of 1947 curtailed the amount of work done on the roads, thereby reducing the demand for road tar. The result is that the Department has considerable stocks of crude tar in hand, which it is hoped will be utilized in the next financial year. Expenditure shows an increase on the estimate of £94,000 due to an increase in the amount of coal carbonized and a general all-round increase in the costs of material and labour.

United Kingdom Gas Corporation.—An increase of 10.6% in 1946 sales of gas compared with sales in the previous year is reported for the 76 undertakings which the Corporation owns or controls, notwithstanding the general restrictions on supplies to domestic and industrial consumers which have been in operation during the period. Gas sold amounted to 14,008 million cu.ft., a record total, which was 1,352 million cu.ft. more than the amount sold in 1945. The total number of consumers served was 428,278, representing about 4% of the consuming public supplied by the entire British Gas Industry. Of the amount sold 63.8% went to domestic consumers; industrial consumers took 22.5%, commercial consumers 10.1%, public lighting 1.8%, and bulk supplies 1.8%.

Lincoln Gas Department.—There was a net loss of £1,168 on the undertaking for the year ended Mar 31, compared with a profit of £13,250 in 1946 and £33,344 in 1945. The assets of the undertaking were valued at £907,116 and the capital and revenue liabilities were put at £404,986. An increase of 181,000,000 cu.ft. in gas consumption made a record output for the Department. Sales of appliances were very satisfactory under difficult conditions. Quantities of residuals made were a record, although benzole production was considerably down due to coal difficulties. Coal cost £3,200 more owing to increased prices, wages and salaries were up £3,330, and the total of all the increased expenses the Department had to meet amounted to £17,000. Income from ordinary gas consumers went up by £8,000, from industrial consumers by £9,780, and from prepayment consumers by £522, making total increased income of £24,000. Total income was £313,600. The result, after taking off £19,103 for the 10% rebate to consumers, showed an increased profit of £28,854.

Hawick Gas Company.—The report of the Directors recommends that a dividend of 5%, free of tax, be paid for the year. Gas sold during the past year amounted to 199,955,100 cu.ft.—an increase of 15% on the year and of 94% over the past ten years. Mr. J. Boyd Sime, Director of the old Company and Chairman of the present Company since its inception in 1930, has decided not to seek re-election owing to health reasons, and the Directors record high appreciation of his outstanding services.

COMPANY NEWS

Thomas De La Rue & Co., Ltd.—The final Ordinary dividend for the year ended Mar. 29 is raised by 5% to 40%, making 50%, against 45%, for the year. Profit is £423,952, according to a preliminary statement, compared with £452,570 for 1945-46 after deduction of grants to subsidiaries. The sum of £50,000 again goes to reserve, and £134,149 is carried forward, against £88,192.

GAS STOCKS AND SHARES

A new three-weeks account which opened on Wednesday covers the Bank Holiday period and it is also the first account in which purchasers will have to face the double stamp duty. After a busy start there was a sharp falling off in activities and prices, and the number of Stock Exchange markings fell on the first day to 10,769, compared with 15,213 on the previous day. British Funds suffered a setback and the rest of the market drifted downwards, a lack of buying being almost equalled by a reluctance to sell. Towards the end of the week there was a short-lived rally in British Funds. The leading industrial shares improved, but price changes were small. Including firm applications from underwriters amounting to £6,500,400, subscriptions for the £15,000,000 Steel Company of Wales 3% first mortgage debenture stock totalled £10,573,625, actual public participation thus being restricted to £4,073,225, or 27% of the total. To finance development of new types of cookers, Sidney Flavel & Co., Ltd., have obtained Treasury consent to an issue of a further 600,000 Ordinary shares of 4s. at par. The present capital is £120,000, and an extraordinary meeting has been called for to-day (July 23) to sanction an increase of £250,000.

There was increased business in gas stocks during the week, with very slight variations in price. Rises and falls recorded during the week were as follows:

OFFICIAL LIST

Cardiff, cons. ord. (xd. July 16)	121	—126	—	1
Commercial, ord.	87½	— 90½	—	½
Gas Light and Coke, 3 p.c. con. deb	93	— 98	—	1
Great Yarmouth, 8½ p.c. max.	10	— 12½	—	3
Imperial Continental, cap.	118	—123	—	1
Do. 3½ p.c. red. deb. (xd. July 16)	97	—102	—	1
Liverpool 5 p.c. ord.	119	—123	+	1
Sheffield cons.	139	—144	+	1
Do. 4 p.c. red. deb. (xd. July 16)	98	—103	—	2
South Eastern ord.	20/6	— 22/6	—	6d.
Do. 4½ p.c. red. cum. pref.	20/-	— 22/-	+	6d.
South Metropolitan, 5 p.c. red. deb. (xd. July 16)	97	—102	—	1
United Kingdom, ord.	22/6	— 24/6	+	6d.

GAS PRODUCTS PRICES

The London Market

July 19

There is little to report in connexion with the coal tar products market. The demand for most products continues steady with prices controlled at the previous levels by Government Orders.

The following are some of the prices of the chief products for use in the home market:

Road tar, 6½d. per gall. filled into buyers' road or rail tanks at sellers' works.

Crude naphthalene prices are from £8 1s. per ton to £12 13s. per ton according to grade, these prices being for minimum 4 ton lots ex sellers' works, bags free.

Hot pressed naphthalene costs £15 14s. per ton in bags ex producers' works.

The prices for refined crystal naphthalene are from £29 2s. per ton in bags to £35 5s. per ton in 1 cwt. cases; refined ball and flake naphthalene prices are from £32 6s. 6d. per ton in bags to £38 9s. 6d. per ton in 1 cwt. cases. All these prices are for minimum 4 ton lots delivered buyers' address.

Pitch for briquetting remains 75s. per ton in bulk ex makers' works.

Creosote for timber preservation is 5½d. per gall. in minimum 800 gall lots ex makers' works in bulk.

Cresylic acid prices vary from 3s. 6d. to 5s. per gall. ex makers' works according to grade.

Coal tar naphtha prices range from 1s. 11d. to 2s. 11d. per gall. and xylol prices from 3s. 3½d. to 3s. 7d. per gall. carriage paid buyers' address in 1,000 gall. lots in bulk.

The Provinces

July 19

Product market conditions in the provinces remain unchanged so far as the home trade is concerned, for which most of the prices are subject to controls, but there is increased activity in the export market. Average prices for gas-works products this week are: Pitch, 75s. per ton; toluole, naked, North, 90's, 2s. 4d. to 2s. 6½d. per gall.; pure, 3s. 2½d. Prices for carbolic acid 60's anthracene, creosote oil (hydrogenation), coal tar oils (timber preservation, &c.) and strained anthracene oil are controlled by Government Orders. Prices for road tar are increased by one penny per gall. by S. R. & O. 1947, 177, under which Order there are also increases in the prices of naphthalene.

Scotland

July 19

All products are in good call at the moment.

Refined tar.* Yield to the distiller is 6d. per gall. ex works, naked. Creosote oil. Timber preserving quality,* 5½d. to 6½d. per gall.; hydrogenation oil,* 5⅞d. per gall.; low gravity or virgin oil,† 7½d. to 7½d. per gall.; benzol absorbing oil, 6½d. to 8d. per gall. Refined cresylic acid is 3s. 6d. to 4s. 6d. per gall. ex works, naked, according to quality. Crude naphtha,† 7d. to 8d. per gall. Solvent naphtha.* Basic maximum prices delivered in bulk, 90/160 grade 2s. 10d. per gall, and 90/190 heavy naphtha, unrectified 2s. 0½d. per gall, rectified 2s. 4d. gall. Pyridine,† 90/160 grade 15s. per gall., and 90/140 grade 17s. per gall.

* Price controlled. † Uncontrolled.